EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION AMONG SCHOOL AGE CHILDREN IN SELECTED SCHOOLS AT NAGERCOIL

DISSERTATION SUBMITTED TO

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

CHENNAI

IN PARTIAL FULFILMENT FOR THE DEGREE OF

MASTER OF SCIENCE IN NURSING

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EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION AMONG SCHOOL AGE CHILDREN IN SELECTED SCHOOLS AT NAGERCOIL

BY

Miss. R.SUJATHA KANNAN

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ABBREVATIONS

SL.NO	ABBREVATIONS	EXPANSION
1.	**%**	Percentage
2.	S	Significant
3.	NS	Non-Significant
4.	SD	Standard deviation
5.	CBCL	Concentration and behavior check list
6.	DEO	District educational office
7.	PACT	Physical activity and cancellation task
8.	TRF	Teacher rating form
9.	UK	United Kingdom
10.	USA	United state of America

ABSTRACT

"A study to assess the effectiveness of concentration enhancement therapy on concentration among school age children in selected schools at Nagercoil" was done by Miss. R. Sujatha kannan as a partial fulfillment of the requirement for the Degree of Master of Science in Nursing at Sri. K. Ramachandran Naidu College of nursing, Tirunelveli under the Tamil Nadu Dr. M. G. R. Medical University, Chennai during the year September 2015.

The objectives of the study were:

1. To assess the pre test and post test level of concentration among school age children in experimental group and control group.
2. To find out the effectiveness of concentration enhancement therapy on concentration among school age children in the experimental group.
3. To compare the pre test and post test level of concentration among school age children in experimental group.
4. To associate the post test level of concentration among school age children with their selected demographic variables in experimental and control group.

The following hypotheses were formed for the study:

All hypotheses are tested at 0.05 levels.

H_1: The mean post test level of concentration among school age children in experimental group will be significantly higher than the mean post test level of concentration in the control group.

H_2:The mean post test level of concentration among school age children in the experimental group will be significantly higher than their mean pre test level of concentration.

H_3: There will be a significant association between the post test level of concentration among school age children in experimental group and control group with their selected demographic variables.

The study was based on theImogene King's Goal Attainment Theory. The quantitative approach was used for this study. The study was conducted in St.Xavier,St.Francises, little flower and PunithaAlosious primary Schools at Nagercoil. The design adopted for this study was true experimental design to evaluate the effectiveness of concentration enhancement therapy on concentration among school age children. Simple random sampling technique was used to select 30 samples for control group from little flower and PunithaAlosious primary schools in Nagercoil and the same method was used to select 30 samples for experimental group from St.Xavier and St.Francises primary schools in Nagercoil.

The data collection tool used for the study was Modified Raven's assessment scale. The content validity of the tool was obtained from four nursing experts and medical experts in the field of pediatrics and psychiatry. The reliability of the tool(r=0.89) was established by test re test method by using Karl Pearson's correlation coefficient formula. The tool was accepted as reliable by the clinical experts. Pilot study was conducted to find out the feasibility and the data analysis was done.

Data collection was done by using the Raven's assessment scale and the data obtained were analyzed both in terms of descriptive and inferential statistics.

The major findings of the study were:

1. In experimental group the post test mean value of concentration was 121.3 with the standard deviation of 30.32. In control group the post test mean value of concentration was 96.6 with the standard deviation of 26.5. The calculated't' test value was 3.388.

2. In experimental group, the pre test mean value of concentration was 80.16 with the standard deviation of 19.10 and post test and the mean value was 121.3 with the standard deviation of 30.32. The mean difference was 41.16. The calculated‘t’ test value was 6.291.
3. There was significant association between the post test level of concentration among school age children in the experimental group with their demographic variables such as number of children in family.There was no significant association between the post test level of concentration among school age children such as age, gender, religion, area of residence, type of family, birth order, educational status of father, educational status of mother, occupational status of father, occupational status of mother, family income and the child residence.
4. There was no significant association between the post test level of concentration among school age children in the control group with their selected demographic variables such as age, gender, religion, area of residence, type of family, birth order,number of children in family, educational status of father, educational status of mother, occupational status of father, occupational status of mother, family income and the child residence.

On the basis of the findings of the study, it is recommended that:

The following studies can be undertaken to strengthen concentration enhancement therapy as a good remedy for concentration among school age children.

- A study can be carried out to assess the academic performance and learning disabilities among school age children.
- A study can be conducted with large sample size to generalize the results of the study.
- A study can be conducted to different population like special children and preschool children.

- ♣ Comparative study can be conducted to find out the effectiveness of concentration enhancement therapy on concentration among ageschool children in days scholar and hostel students.

Conclusion

From the result of the study, it was concluded that, providing concentration enhancement therapy to the school age children was very effective in improving the level of concentration. Therefore, the investigator felt that, more importance should be given for concentration enhancement therapy to increase concentration among school age children.

CHAPTER - I

INTRODUCTION

"Concentration is the progressive realization of a worthy goal "

- Earl Nightingale

BACKGROUND OF THE STUDY

School age period is one of the most important period of one's life. It is a period of stress and strain of day dreams of intense affection and excitement. It is full of love and showers its affection on any one without any pre thinking. The school age are still lacks maturity of thought and experience.

The transitional period between childhood and adulthood is characterized by physical and psychological changes. Psychological changes due to lack of love, affection, security, broken family, siblings jealousy and inappropriate school environment which affects the childrenpsychological development due to these problems some of the school age children are not able to concentrate in their studies. **(Lillian Wade- 2014)**

Children are vital to the nation's future. Children's health has effects that reach far into adulthood. So it is in the nation's interest to have healthy children. Healthy children are more efficient and able to learn better and in coming days are more likely to become healthy adults, who will contribute as productive citizens and workforce to the continued vitality of the society. Habits formed in childhood have a long-term impact on health and wellbeing in order to keep the children healthy. Therefore, parents have to pay attention on their growth and development of each stage.**(Aday 2013)**

The ability of concentration is important for success both at school and home. Children between 6-12 years think in advance and have to perform complex tasks. A six year old child normally can follow a series of three commands in a row and is able to focus on a task for at least 15 minutes. By the age of 10, children can follow five commands in a row and are able to focus attention for about an hour. A child who is able to concentrate is likely to be a better learner. Ability to concentrate on a task, no matter what is going on around you or you find your mind wandering away, despite distraction, boredom or fatigue is a skill that requires a lot of self-discipline. **(Anderson 2012)**

Many different things can cause lack of concentration from physical (such as fear of something dangerous) to emotional (such as worry about parents love towards siblings.) Identifying what may be causing lack of concentration is often the first step and how to improve lack of concentration is the next step. The level of concentration can be improve by doing regular exercise, cancellation task like letter cancellation and color cancellation task. Exercise and Cancellation task promote physiological activity and stimulate muscular development .Physical, physiological, social and intellectual developments are enhanced by exercise and cancellation task **(Dr.Ramkumargupta, 2012).**

Education is one of the fastest growing sectors in India. This is due to a sharp rise in the disposable income of working population and parents are willing to increase their expenditure on their child's education. It is also stated that there is a lack of quality education in India and that the learning experience through rote (mechanical process of memory) method of books and classroom teaching results in poor concentration level of students. Indian students are turning out to be polarized

towards academics and need to focus on extracurricular activities for overall development. **(E- Journal of psychology – 2010)**

Importance of Cancellation tests consists of improving concentration and a repetitive motor response. Cancellation tests was administered to assess functions such as selective and focused concentration, attention, memory, and the activation and inhibition of rapid responses. Cancellation test has been used in similar type of design on Indian population **(Natuand Agarwal, 2010).**

If brain has to concentrate consistently for hours at a time it loses processing power and concentration levels slip. If you get a single space in order to reboot your memory, concentration level keep the letter cancelation sheet with you and cancel the letter as fast you can it stimulate the brain and body to work fast**(Nankith and Prashob, 2010).**

Concentration requires a great amount of effort and time. By doing color cancellation test brain will perform well. Still, there are fairly easy ways to improve concentration quickly and effectively. It helps to improve the flow of oxygen to the brain. Blood is the main vehicle of oxygen in our body. But blood gets pooled in the lower half of our bodies as a result of gravity and doesn't push as much oxygen to the brain, wherecolor cancellation helps to improve concentration and it also help in improving memory of school children **(Mohan prasath 2010).**

Some students seem naturally enthusiastic about learning, but may need or expect their teacher to inspire, challenge and stimulate them. The factors affecting students concentration during the class depends on the interest in the subject matter, the types of classroom activities involved, desire to achieve self-confidence and self-esteem as well as mood and determination. **(Bligh and Sass -2010)**

Low concentration and attention levels are common problems among millions of children. With each passing day, more children were suffering from concentration problems, when they find it extremely difficult and tough to concentrate or focus on a particular issue for too long. Loss of concentration could pose a serious problem of the children, especially in his or her classroom. Nevertheless, nurturing concentration and focus in child is not a difficult task. Persons can help the children to develop focus and concentration, by using a number of useful activities and exercises. **(Andrew loh- 2010)**

Benefits of concentration enhancement therapy are: purifies the blood and respiratory system, helps to relieve nervousness and concentrate, good for staying mentally healthy, clearing the mind and your thoughts, helps in concentration and focusing and boosts memory power, to control your temper and prevent outbursts of anger. It also calms down your heartbeat which is also helpful for high blood pressure and makes your mind, body to concentrate. **(Agbar, 2010)**.

Physical activity is known to increase special neurotransmitter substances in the brain (endorphins), which create a state of well-being and total body movement such as exercises enhances the functions of other body systems such as circulatory, respiratory, skeletal and muscular systems. Concentration enhancement therapy may stabilize the sympathetic nervous system, modulating serotonin and dopamine concentrations. **(Sanjith- 2008)**

Dopamine is a neurotransmitter or a chemical that helps brain cells communicate with one another. Its specific function is to regulate attention, concentration, memory, pleasure, reward and motor functions. Dopamine levels that are too low can lead to mental health symptom in school children, including difficulty

concentrating, when dopamine levels are too high it can cause psychosis. In addition dopamine is known to play a central role in addition. When the school age children are doing concentration enhancement therapy it will regulate brain dopamine levels. **(Scott Browner- 2013)**

Getting distracted is normal for young children, but is a major problem when the child grows up and is unable to concentrate on academics and school work. Lack of concentration or an inability to focus on the task at hand is a common concern. They have a lower attention span leading to loss of interest in the activity or object quickly. So it is not easy to keep them occupied them with one or other activity. **(Swathy.N- 2008)**

NEED FOR THE STUDY

Concentration is fixing the mind on an external object or an internal point. Concentration is the only way to get rid of worldly miseries and tribulations. School age children can get the penetrative insight. School age children can do any work with greater efficiency. Concentration purifies and calms the surging emotions, strengthening the current thought and clarifies the ideas. **(Wikipedia)**

The global prevalence of Lack of concentrationhave been estimated from 500 million to 2.3 billion. Around 15.3 million over 6-12 years of age are having lack of concentration, as a result of uncorrected of whom 8 million are drop out. Worldwide estimation of prevalence of concentrationin 2011, is 1.4 million. In India, it is estimated that 5.1% of children in schools had a lack of concentration.WHO estimated about 119 million children are having lack of concentration, among these 12 million children are having lack of concentration due to family problems**.(WHO-2011)**

India is the 2nd most populous country in the world with over 1.21 billion people (2011 census). The children age 0-15years constitutes about 31.1% (Male 190,075,426, Female 172,799,553) about 15% consist of school children. Childhood years are significant for intellectual growth and personality development. It is the period of maximum learning and is crucial for education of the child. It is mainly the young person to live in the community should be prepared and learns good social adjustment. **(Nejad-2010)**

Some children have lack of concentration in performing a task, inability to stay on task, failure to complete task and shift from one uncompleted task to another. Several studies have manifested that approximately 3.7% of school age (6-12 years) children have attention deficit disorders- USA-4.8%, Korea-7.6 to 9.5%, India- 10-20%, UAE -29.7% respectively. Recent studies have shown that approximately half to one third of children with lack of concentration continue in adulthood. **(Wikipedia)**

Concentration enhancement therapy builds and enhances or restores natural neural pathways in the body and brain, to assist natural learning.Physical activity for15 minutes will improve concentration, memory and classroom behavior among elementary school students. Concentration enhancement therapy is a learning enhancement system that draws out normally unavailable brain potential through simple movement based activities. Learning difficulties are experienced when there are only limited areas of brain activation available to a student**.**Concentration enhancement therapy stimulates the whole brain for effective functions, and enables uninterrupted Brain-Body communication. This results in effortless learning and higher levels of performance.**(Stewart Ross- 2010)**

Lack of Concentration is prevalent among 10-20% of the children in the age group of 4-12 years in the world. The prevalence of lack of concentration in Western Australia was 13.2%of the children had Lack of Concentration out of which 36.5% had significant problems**.(Austin.l-2011)**

The general effects on physical and mental well-being, regular physical activity and cancellation task may be linked to improved concentration and learning abilities. Whether you wish to improve your concentration on everyday tasks, command the attention of a group of students or treat the lack of concentration, regular physical activity may help to improved concentration, memory and classroom behavior among elementary school students. Contrary to what may be expected, theimproved concentration and academic performance were more pronounced among children who exercised or involve in concentration enhancement therapy**. (Dr.Stewart Trost 2012)**

National Statistics of Labour force shows that 71-77% of the working mothers have children in the age group of 5-16 years.One hundred samples were selected through non-probability convenience sampling technique – 50 employed mothers and 50 unemployed mothers of primary school children. The result revealed that among the primary school children of employed mothers, 33 (66%) had below average academic performance and 17 (34%) had mild average in academic performance, and none had poor academic performance , whereas among the primary school children of unemployed mothers majority (78%) had mild academic performance , 11 (22%) had moderate academic performance , and none had severe academic performance. The estimated value score was $t=6.348$ at $p<.05$.The study concluded by saying that the

lack of concentrationin primary school children are higher among employed mothers than in unemployed mothers.**(India Current Affairs, 2010)**.

Concentration enhancement therapy consists of simple movements for coordination of eyes, ears, hands and the whole body. The ultimate goal ofConcentration enhancement therapy is to create a fully functioning mind/body system, called as an "integrated" state. It is different from other learning supportive programmes in which it prepares learners to learn.**(Joshlinpauline- 2009)**

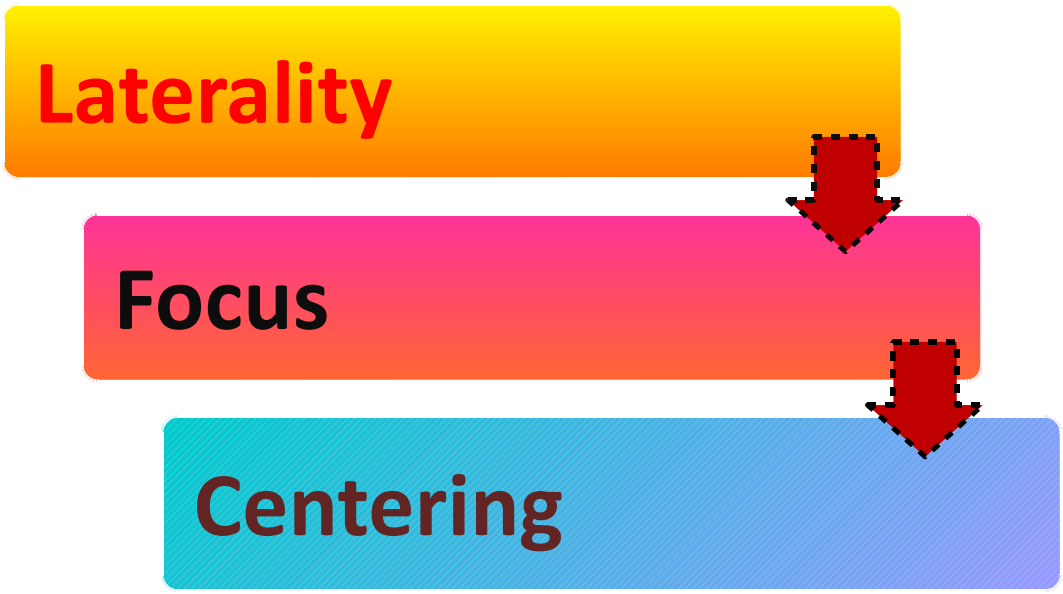
TheConcentration enhancement therapy activities help in communication, comprehension, memory, organization and avoidance of stress, which enables learning.Concentration enhancement therapyencourages the learner to use the whole brain, thereby relaxing the fight or flight response in favour of keeping the memory and reasoning centres of the brain switched on.Concentration enhancement therapypromotes the ability to learn and to retain learning at a deep, whole-brained level. New learning occurs when a person is relaxed and easily able to access their sensory system for seeing and listening, and to comfortably feel and express their feelings. Learning tends to be more permanent, accessible, and applicable when a person is not tensed, stressed, or frightened.Concentration enhancement therapymovements increases self-confidence and self- esteem,motivation and behavior of the students.Concentration enhancement therapy designed to increase academic achievement in the areas of maths and reading / language arts would be successful**. (Amlin Elizabeth Taylor -2009)**

A descriptive Study was conducted on lack of concentration among 50 students of a recognized School in Coimbatore. The result showed that 40% of the students were with the moderate levels of concentration, 36% of the students were

with the low levels of concentration and 24% with the poor levels of concentration **(Hemanth.S-2009)**

The concentration enhancement therapy consciously activate the whole mind/ body system, stimulating nervous system activity equally in all parts of the body and lessening the fight/ flight reaction. When learning is easy and stress free, the learner regains his/ her innate interest in learning and is again motivated to achieve learning goals. Concentration enhancement therapy consists of three dimensions they are

Dimension of concentration enhancement therapy



Concentration enhancement therapy is a series of activities designed to help learners coordinate their bodies better. This holistic approach to learning also enables students to find equilibrium between both sides of the brain and the body. TheConcentration enhancement therapydescribe brain functioning in terms of three dimensions- laterality, focus and centering.

Laterality is the ability to coordinate one side of the brain with the other especially in the visual, auditory and kinesthetic midfield, the area where the two sides overlap by giving colour cancellation task. This skill is fundamental to the ability to read, write and communicate.

Focus is the ability to coordinate the back and front areas of the brain. It is related to comprehension, the ability to find meaning, and the ability to experience details within their context.

Centering is the ability to coordinate the top and bottom areas of the brain. This skill is related to organization, grounding, feeling and expressing one's emotions, a sense of personal space, and responding rationally rather than reacting from emotional overlay.

Concentration enhancement therapyare based on 3 simple principles:

- Learning is a pleasant and natural activity which goes on throughout our whole lives
- Learning blocks are caused by the students' incapacity of coping with anxiety and stress derived by a task which is perceived as too difficult
- All are more or less blocked as far as learning is concerned since we have all learned not to more. (**Doris M. Daly - 2009)**

Giju Thomas (2009) conducted a study to assess the concentration ability in school children by intensive practice of integrated approach of concentration enhancement therapy through cancellation test at Selam, Tamil nadu . Normal healthy 276 Tamil medium school children aged 6-12 years (14.25+1.09) were randomly assigned into three groups. Cancellation (color, letter & character) test was administered to children in all three groups on the first and ninth day of the residential

programme. Comparison of pre and post values showed that there was significant improvement in cancellation test for all three groups intelligent quotient was(12.53%),Color cancellation group was (10.10%) & Physical stamina group was (11.98%) letter cancellation Intelligent quotient group was (10.10%) creativity group was (11.98%)physical stamina was 13.29% .The study concluded that the three integrated therapy were effective in improving concentration.

The primary school age children has lack of concentration in academic performance due to less love and security, low socio economic status of the family, illiterate parents, children living with single parent. By seeing the prevalence rate of India as 61% of concentration among school age period it is the starting point for lack of concentration so school age is the best time to mould up the children to achieve their goals. Concentration enhancement therapy which improves the level of concentration still more research is needed to prove this more specifically. This initiates the investigator to use concentration enhancement therapy which as a technique to increase the level of concentration among school age children.

STATEMENT OF THE PROBLEM

A Study to assess the effectiveness ofconcentration enhancement therapyon concentration among school age children in selected schools at Nagercoil**.**

OBJECTIVES

- To assess the pre test and post test level of concentration among school age children in experimental group and control group.
- To find out the effectiveness of concentration enhancement therapy on concentration among school age children in the experimental group.
- To compare the pre test and post test level of concentration among school age children in experimental group.

- To associate the post test level of concentration among school age children with their selected demographic variables in experimental and control group.

HYPOTHESES

- H1: The mean post test level of concentration among school age children in experimental group will be significantly higher than the mean post test level of concentration in the control group.
- H2: The mean post test level of concentration among school age children in the experimental group will be significantly higher than their mean pre test level of concentration.
- H3: There will be a significant association between the post test level of concentration among school age children in experimental group and control group with their selected demographic variables.

OPERATIONAL DEFINITIONS

Assess

It is the process of systematically, continuously, collecting, validating and communicating the data regarding the level of concentration and effectiveness of concentration enhancement therapy to improve concentration among school children between the age group of 7-9years who are studying in selected primary schools.

Effectiveness

It is the process of determining the outcome of concentration enhancement therapy and it was measured by modified Rovens assessment scale.

Concentration enhancement therapy

It refers to a series of activities use to activate the brain function and to improve the concentration. It includes physical exercises, letter cancellation test, and colour cancellation test. It was administered for 30minutes once a day for 6 days per week about 4 weeks.

Concentration

In this study it refers to the lack of concentration among school age children. It includes class room activities and achieving less mark in academic performance as a result concentration in studies as measured by Rovens' assessment scale.

School age children

In this study it refers to third standard students between the age group of 7–9 years of both sex and those who are having average and below average level of concentration as measured by Rovens' assessment scale.

ASSUMPTIONS

- ✓ Most of theschool age children may have low concentration.
- ✓ Concentration enhancement therapy may be beneficial to improve the level of concentration.
- ✓ Level of concentration may vary from individual to individual.
- ✓ Both male and female school age children may have low concentration.

DELIMITATIONS

- ❖ The study is delimited for a period of 4 weeks.

- ❖ The study is delimited to the school age children studying third standard in the age group between 7- 9 years.
- ❖ The study was delimited to children studying in Tamil medium school.

PROJECTED OUTCOME

1. The study findings will help the nurses to administer concentration enhancement therapy in order to improve the level of concentration among school age children.
2. The findings of the study will help and motivate the teachers to provide concentration enhancement therapy in order to improve the level of concentration among school age children.

CONCEPTUAL FRAMEWORK

The conceptual framework is a set of interrelated concepts that are assembled in together in some rational scheme, in virtue of their relevance to a common theme. Conceptual framework helps to stimulate research and extensive knowledge. **(Polit-1990).**

The conceptual framework for research presents the measure on which the purpose of the proposed study is based. The framework provides the perspective from which the investigator views the problem.

The study bases the concept that the administration of selected measures i.e. concentration enhancement therapy to school age children in selected schools will improve the concentration.

The investigator adopted the Imogene King's Goal Attainment Theory as a base for developing the conceptual framework.

Imogene King's Goal Attainment Theory was proposed by Imogene King in 1890. The Goal Attainment theory was based on the personal and interpersonal systems, which includes the following:

- Interaction
- Communication
- Transaction
- Perception
- Stress
- Growth and development
- Time and action.

Nursing was defined by Imogene King as "A Process of human interactions between the nurses and the client's whereby each perceives the other and the situation through communications. They set goals, explore means and agree on means to achieve goals".

Interaction

According to King, each individual brings to an interaction to a different set of values, ideas, attitudes, and perceptions to exchange. It refers to the verbal and nonverbal behavior of individual and the environment and between two or more individuals with a purpose to achieve the goal. Here the investigator provided concentration enhancement therapy to improve the level of concentration among the school age children.

Communication

It refers to the information provided by one person to another person either directly or indirectly. The other person receives this information and processes it. Here the investigator explained about concentration enhancement therapy and its benefits. The school age children accepted to do concentration enhancement therapy every day.

Transaction

In transaction two individuals mutually identify the goals and the means to achieve it. At this stage the investigator assessed the level of concentration among school age children in order to implement action. If positive outcome is achieved then the intervention is said to be effective, if there is a negative outcome then reassessment to be done.

Perception

It refers to the person's representation of reality. It is universal yet highly subjective and unique to each person. Here the investigator perceives that the school

age children in the schools may have decreased level of concentration. The school age child also perceives that they are having decreased concentration.

Stress

When the individual interacts with the environment, an energy response occurs to objects, events, and persons. Here the school age children those who were studying in school may produce stress related to academic performance.

Growth and development

Individuals are in a constant state of molecular, cellular, and behavioral change. Here the school age children tried to improve the level of concentration by practicing concentration enhancement therapy.

Judgment

The investigator judged that concentration enhancement therapy improves the level of concentration among the school age children. The school age children judged the need to improve their level of concentration.

Reaction

The investigator and the school age children set mutual goals.

Action

The investigator implements the concentration enhancement therapy to improve the level of concentration among the school age children and they set willingness to do concentration enhancement therapy and to participate in this study.

Time

A person experiences a sequence of events that move towards the future. As the individual moves forward, changes occur. Here the school age children practices

concentration enhancement therapy weekly six days for 30 minutes. As the day's move they feel improve their concentration.

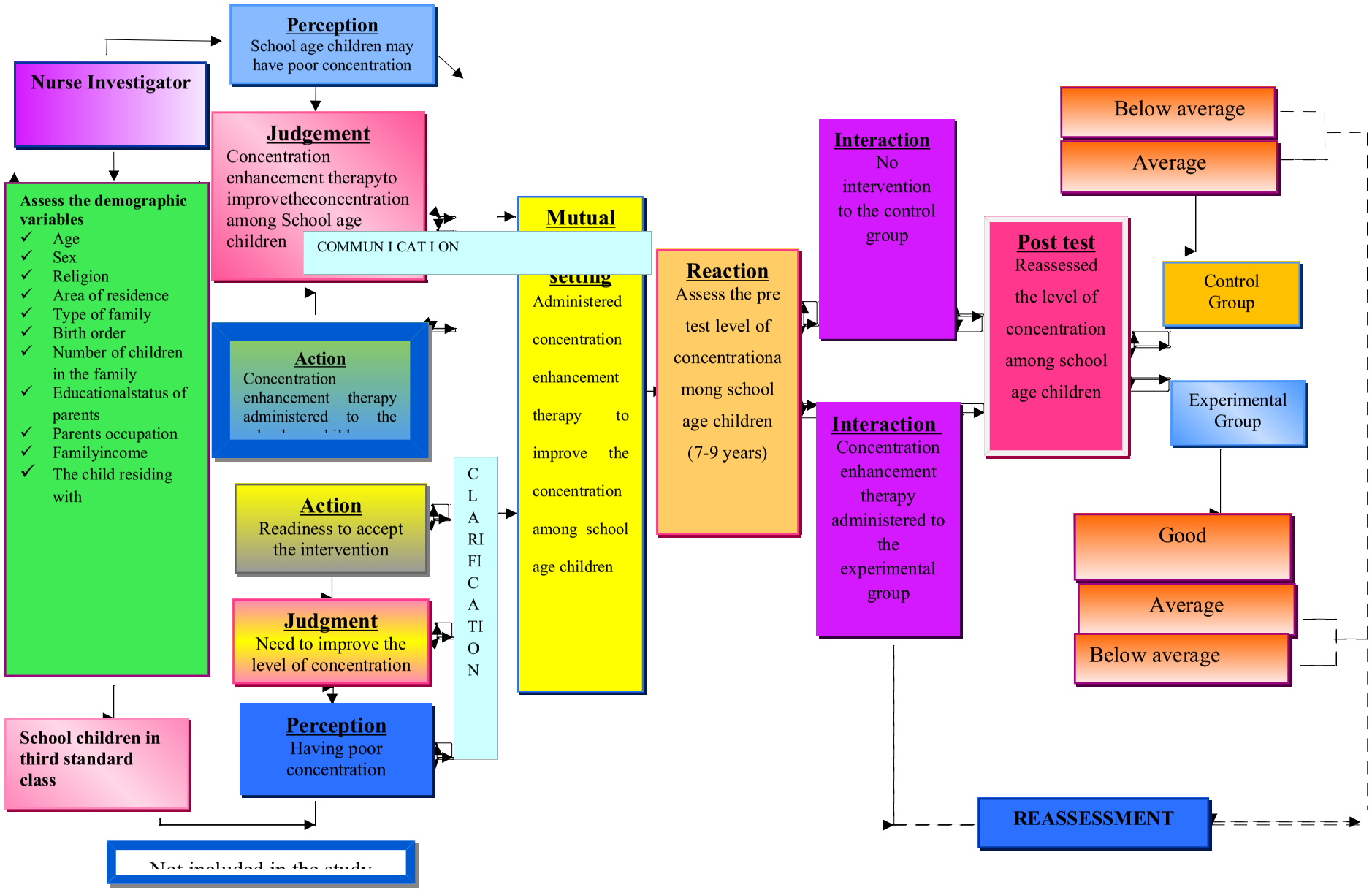


Figure 1: Conceptual framework Based onModified King's Goal Attainment Theory

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CHAPTER II

REVIEW OF LITERATURE

Review of literature is a vital component of the research process. It gives new researcher, orientation for the conduction of the study. It provides the source of research ideas for the new researcher. Review of literature is defined as a critical summary of review on a topic of interest, often prepared to put a research problem in contest **(Polit& Beck, 2006)**

The review of literature in the research report is a summary of current knowledge about a particular practice problem and includes what is known and not known about the problem. The literature is reviewed to summarize knowledge for use in practice or to provide a basis for conducting a study **(Burns, 1997)**.

It is organized under the following sections;

Section-A: Studies related to Effectiveness of concentration enhancement therapy on concentration.

Section-B: Studies related to Effectiveness of concentration enhancement therapy for other academic problems.

Section-C: Studies related to Prevalence of lack of concentration.

SECTION-A:STUDIES RELATED TO EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION

Lena L. Lim and Ee-HeokKua(2011) had conducted an literature experimental study in Oregon state to determine the effects of physical and mental wellbeing on regular physical activity like exercise, letter cancellation,colour cancellation linked to improved concentration, and learning abilities. Sample size was 50 and duration was 10 days. Random sampling technique was adopted. Result

showed that 15 minutes of physical activity had improved concentration, memory and classroom behavior among elementary school students. The researcher concluded 80% improved concentration and academic performance. The results were more pronounced among children.

Bonzia(2010)had conducted a study to examine the ability of 60 elementary school students with concentration problems. Ranging in age from seven to eleven years, the students were matched accordingto age and gender and assigned equally for Concentration enhancement therapy' intervention and onecontrol group. The first treatment group was called the physical activity-onlygroup. This group performed concentration enhancement therapy for twenty minutes twice a day.The treatment was continued five days a week for six weeks. The other treatment group inthis experiment received an additional 10-minute precursor session termed cancellation task. "The mean score for the three trials in each condition were combined as the total balance score, with a total of 30 sec possible" A one-way analysis of variance was computed on gain scores between pretesting and post testing. Differences in improved balance time by groups were significant. The physical activity-plus-cancellation task group improved more.

JongenelisK. et.al (2010) had conducted a randomized study at University of London to assess the effectiveness of concentration enhancement therapy to improve concentration among children with the sample size of 114.State concentration was assessed before and after the therapy education program using the "Ravens concentration assessment scale". The target control groups were (1) a physical education group to control the effects of breathing (2) a group controls the aesthetic sensitivity training, and (3) a mathematics group, Several concomitant variables were measured; age, sex, attitude towards academic performance and previous academic

performance in the class room. The result shows that concentration enhancement therapy significantly reduced anxiety and helps in developing concentration, whereas control group activities were not been obtained such as alike of experimental group.

Huuhka K. and Leinonen E (2010) had conducted a longitudinal study in California to assess the concentration of primary school students. For 25 of them were experimental group, 25 of them were control group. Concentration enhancement therapy showed an increase of 33.22 points on the means of student posttest scores when compared to their means scores on the pretest, the control group showed an increase of 28.25 points, indicating that the use of Concentration enhancement therapyimproved student achievement when long-term memory was involved however, when comparing the means of both groups' performance on chapter tests, the treatment group outscored the control group by 8 points. The difference was not significant, but noteworthy, possibly indicating that the use of Concentration enhancement therapy improved concentration of student achievement when short-term memory was involved, but not long-term memory.

Jane Irving (2010) had conducted an experimental study among 27 school students using three separate groups as controls during the different phases of the nine week study. The study measured the effects of concentration therapies, making up a twenty minutes sequence known as the PACT (Physical activity and Cancellation task) process, on weekly assessment of concentration and performance on 14 technical- motor skill – test. The PACT group experienced a 69.5% of increasing concentration and 18.7 % increase in performance on skill tests, as compared to continued concentration level and higher failure rate in the control group not using PACT.

Hussantunio (2009) investigated the effects of physical activity to improve concentration. 35 minutes of simple physical activity given by the students in Oregon state university for 1 month. Results shows that 90% of improvement in students concentration in their classes.

Matranbinha (2009) evaluated the effectiveness of concentration enhancement therapy on intelligent quotient, concentration in normal school children was done in Birdhum district,West Bengal. It was a stratified random controlled study among 153 students aged 6-12 years selected randomly into three groups. Each set of practices was designed to study its effect on variables like Intelligent quotient, creativity and physical stamina ,concentration .Concentration enhancement therapy include physical activities and cancellation task. Intelligent quotient level of each group was measured using 'draw a man test.' The result showed that there was a significant change in the concentration level at 8.52% . Hence the researcher concluded that this specific concentration enhancement therapy can be incorporated into regular school curriculum for better academic performance.

Giju Thomas (2009) had conducted a study to assess the effectiveness of concentration ability in school children by intensive practice of integrated approach of concentration enhancement therapy through cancellation test at Selam, Tamil nadu. Normal healthy 276 Tamil medium school children aged 6-12 years (14.25+1.09) were randomly assigned into three groups. Cancellation (color, letter & character) test was administered to children in all three groups on the first and ninth day of the residential programme. Comparison of pre and post values showed that there was significant improvement in cancellation test for all three groups intelligent quotient was(12.53%),color cancellation group was (10.10%) & Physical stamina group was (11.98%) letter cancellation Intelligent quotient group was (10.10%) creativity group

was (11.98%)physical stamina was 13.29% .The study concluded that the three integrated therapy were effective in improving concentration.

Dorothy H. L (2008) had conducted a longitudinal study to assess the effectiveness of concentration enhancement therapy activities on reading achievement, attention, and concentration among 60 selected students using standardized Rovens 9 test. The study compared the children's reading percentage scores from May 2007 (the end of the previous school year), to those of May 2008 (the end of the "Concentration therapy" school year). They also compared the scores of students from control classes with the scores of students from "Concentration therapy" classes. The results showedthat 80% of students scored more than 30% increase in reading achievement, attention and their concentration level after Concentration enhancement therapy.

Leslie B. Ranew (2008) utilized concentration enhancement therapy on student achievement, concentration and participation in a primary school U.S. The two classes of 50 students participating in the 8-week study were taught with the same lesson plans and materials. The Concentration enhancement therapy group did 30 minutes of specific activities to begin each class, but students in the control group did not. Post test was conducted with the use of concentration enhancement therapy attitude survey. Results showed mean score is 34.25. There was no significant difference in student achievement or participation, however an Attitudes Survey indicated that students using concentration enhancement therapy believed that use of the activities increased participation in lessons and helped them to concentrate on the classes.

SECTION-B:STUDIES RELATED TO EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY FOR OTHER ACADEMICPROBLEMS.

Andrea Watson (2013) had conducted a study to examine the effect of concentration enhancement therapy on academic achievement for children with developmental disabilities. Concentration enhancement therapy sessions were conducted 2- 3 days per week 7- 8 weeks depending on subject availability. The results of the study showedthat concentration enhancement therapy group produce clear and substantial differences in academic engagement when compared to a control group.

Caricato. S and Thatcher. B (2012) had evaluated the effects of concentration enhancement therapy for 3rd grade students with or without learning disabilities for improving their academic performance. Totally 10 students were selected as samples. Concentration enhancement therapywere given daily for one month. After 1 month post test was conducted. Results showed that more than 62% of students areimproved their academic performance when compared to the pre test scores.Concentration enhancement therapy were improved the academic performance of 3rd grade students.

Joise M Shift (2012)had conducted a randomized study among 52 children selected from Special Day classes. The Concentration enhancement therapy performed a sequence of activities, while the control group engaged in random movements for ten minutes. All children were tested for visual response time before and after the activities. The results indicated that those children exposed to the concentration enhancement therapy improved on the response-time task, but those children in the control group did not.

Zhou W and Yuan Q et.al (2012) had analyzed to explore whether an intervention involving concentration enhancement therapy designed to increase academic achievement in the areas of maths and reading/language arts would be successful. Three groups were used in the study. Each of the three groups was comprised of 20 fourth-grade students. Concentration enhancement therapy are more effective with students who have some form of learning challenge or disability and less effective with students who are academically average or above average in ability.

FreemanK.Williams (2011) had conducted a quantitative approach study to evaluate the effectiveness ofConcentration enhancement therapyon improving the reading abilities among primary school students. A total no.of 205 students were assigned to eitherConcentration enhancement therapyor the control group. Throughout the 2009-2010 school year, 12 teachers incorporated concentration enhancement therapy in the classroom curricula so that the students and teachers did a minimum of 30 minutes ofConcentration enhancement therapy per day. Equal samples of students were randomly selected for theConcentration enhancement therapy and the control group who did not useConcentration enhancement therapy, and their test scores were compared. The results indicated that those children in the concentration enhancement therapy group improved their reading abilities, as measured by a standardized test, twice as much as did those in the control group.

Michael T Diamond(2011) had conducted an experimental study among the age group of 6 to12 years onConcentration enhancement therapy. Two group were selected as experimental and control group.Concentration enhancement therapywere implemented and checked for visual stimulus, which proved their response times to a four-choice visual stimulus, after 30-minuteConcentration enhancement therapyof

three activities had a marked significant findings in each case indicated thatConcentration enhancement therapy activities benefited.

David Shapiro. R & Jensen. R (2010) investigated the effects of concentration enhancement therapy on learning impact for 3rd grade students. Totally 28, 3rd grade students were selected as sample.Concentration enhancement therapy was given for 7 weeks twice a day. After 7weeks post test were conducted by using structured interviews and observations. Results shows more than 40% improvement.Concentration enhancement therapy was improved on learning impact of 3rd grade students.

Saticoy et.al (2010) had conducted a study to evaluate the ability of Elementary School students in Ventura, California. Twelve teachers of different grades like K, 2, 3, 4 and 5 took concentration enhancement therapy once a week for an hour after school during the school year. The teachers then taught the children concentration enhancement therapy and the children became quite skilled in the use of concentration enhancement therapy for self-help. Each class did a minimum of 25 minutes ofConcentration enhancement therapy per day. The tool used is standardized format called the Stanford 9 test. They compared the scores of students from control classes with the scores of students from "Concentration enhancement therapy" classes. The results shown are a percentage scores which compares the standing of the child relative to others. If a child scores 30% this means they scored higher than 30% of the other children at their grade level, and lower than the other 70%.The results of the study were impressive.“Concentration enhancement therapy" had got better, rising from 55 to 89 percentage points, while the scores of the Control group had received noConcentration enhancement therapy support improved 0 to 16 points.

David Saunders (2009) examined a non equivalent control group study on the effects ofConcentration enhancement therapy on 3rd grade students for improving reading, writing, maths and motor skills. Pre test scores shows 20% of reading, 30% of writing, 15% of maths and 40% of motor skills.Concentration enhancement therapy were given twice a week for 8 weeks. After that post test was conducted with the use of Stanford-9-test. The results shows 40% of reading, 40% of writing, 25% of maths and 60% of motor skills improvement after received theConcentration enhancement therapy.

SECTION-C: STUDIES RELATED TO PREVALENCE OF LACK OF CONCENTRATION

Dennies.M.Brava(2014) investigated a study in(UK) United kingdom on prevalence of lack of concentration among a sample of school age children and evaluate a new system for concentration screening in schools in UK. Information about the child's symptoms, history and family history was acquired by means of a parental questionnaire and entered into the program prior to the concentration screening. The study results showed that lack of concentration screening with the outcome gave a behavioural problems of 93.8% and lack of concentration in studies of 96.1%.The study concluded that significant number of young school age children have un suspected remediable lack of concentration and behavioral problems.

Chinguhungsan.S.H (2013) evaluated the distribution pattern of concentration and prevalence of concentration among school-age children inWestern China . A random sampling strategy in geographically defined clusters was used to identify children aged 6-15 years in Yangchuan. The study results showed that a total of 3469 children living in 2552 households were selected, and 3070 were examined. The prevalence of lack of concentration were 3.26%, 13.75%, and 3.75%,

respectively. The study concluded that lack of concentration status changes gradually as age increases.

Nakhonpathom(2013) assessed the prevalence of thelack of concentration in primary school-aged childrenin Bangkok. Random selection of geographically defined clusters was used to identify the study sample. The study results showed that among 2340 children, 1100 in Bangkok 1240 were examined. The prevalence oflack of concentration in Bangkok and were 12.7% and 5.7% respectively. The cause of lack of concentrationdue to parents and environment 97.6%, siblings is 0.5%, other causes is 0.8% and unexplained causes is 1.1%. The study concluded that there was high prevalence of lack of concentration in school age children.

Donna Mashalshan (2012) conducted an explorative study to assess the lack of concentration and behavioral problems in Singaporean children based on parent teacher and child reports. A community sample of 2139 children between the age group of 6-12 years was selected. Child concentration and behavior check List (CBCL), Teacher Rating Form (TRF) and child report questionnaires for lack of concentration and anxiety were administered. Higher prevalence of lack of concentration and behavioural problems was identified by CBCL (12.5%) than by TRF (2.5%).Correlation between child reported concentrationand anxiety, parents' and teachers' reports were low to moderate. The study concluded by stating that Singaporean children had high rates of externalizing problems (4.9%) than internalizing problems.

Abdulaharawn(2012) case control study were conducted to determine the prevalence of concentration and behavioral problems among male Saudi school children and identifying their risk factors. One thousand three hundred and thirteen male school children of Al-Abanae school were included. Study was conducted in two

phases: a cross-sectional approach (screening phase) to assess their concentration and behavioural problems and a case control phase to study risk factors. Among the 1313 participants, 109 (8.3%) were psychologically disturbed students (according to cut-off score for boys estimated at the 90th percentiles). Among the studied socio-demographic variables, educational level (intermediate versus primary), and the mother's occupation (working versus non-working) were associated with a higher risk of developing lack of concentration and behavioural disturbance. The study concluded that lack of concentration and behavioural problems in children are associated with education and occupation of mothers

Beeveebenazir (2012) had conducted a study on Assessment of lack of concentration and behavioral problems among 1488 primary school children in Karachi, Pakistan aged 5 to 11 years children's mental health was assessed using Strength and Difficulties Questionnaire (SDQ). The result show that 34.4% parents rated children as falling under the "abnormal category" on SDQ, 35.8% were reported by the teacher. The study concluded that there was gender difference in prevalence. Boys had higher estimates of lack of concentration whereas emotional problems were more commonamongst females. The study concluded by saying that the prevalence of concentration was more in employed parents and also there was gender difference (more common in boys than girls).

KusanthAgarwal (2011) investigated the prevalence among school children in Himachal and North India. The study results showed that prevalence of lack of concentration was 31.6%, socio economic status22%,single parent 2.5%, siblings 2.3%, anxiety 1.8 %,others 0.8%. The study concluded that a high prevalence of lack of concentration among primary school age children was observed.

Ajmal.k.Nowfal (2011) had done a descriptive analytical study to assess the concentration level of children of working mothers atMangalore. Purposive sampling technique was used to select 150 samples from two schools. Data were collected using concentration rating scale and emotional rating scale. Majority of the children of working mothers had moderate lack of concentration (82%), 10.66% had mild lack of concentration, and 17.33% had mild emotional problems. When thevarious concentration and emotional problems were analyzed, it was found that the mean percentage score of lack of concentration of children of the working mothers was maximum (52.33%) for the problem of personality disorder whereas it was least (0.33%) for antisocial behavior. The mean percentage score of emotional problems was maximum (66.5%) for anxiety and least (2.66%) for jealousy. For conduct disorder, adjust mental problems, habit disorder, and educational difficulties, it was 42.4%, 40%, 29.8%, and 49.8%, respectively. For fear, anger and irritability, depression, sleeping disturbances, and feeling of loneliness it was 33%, 39.87%, 60%, 30.5%, and 50%, respectively. The study concluded that mothers' parenting style had a great impact on children's emotional and educational problems.

Tanya.k.Joseph (2010) investigated the relationship between concentration and GPA (grade point average) through concentration in school age students at Kochin. The sample was 400 students (200 male and 200 female) in the age range of 8-12 years. The instrument used for data collection was the Ravens assessment scale (RAS). An analysis of the data obtained from the current study showed that, for the respondents concentration had a significant impact on grade point average (GPA) through memory ($z=1.93$, $p\leq 0.02$). The results of the study recommended that academic achievement and mental health be developed in school settings through the

use of support strategies such as educational guidance and concentration enhancement therapy and teaching life skill programs.

Joyce Annabelle (2009) evaluated the prevalence of lack of concentration in southern India. The study results showed thatlack of concentration was the main cause of less academic achievement in children aged between 7 and 15 years in rural India that was 61%. Lack of concentration was present in 4.1% of the children. Moderate level of concentration was present in 0.8% of children. In urban areas of India the prevalence of lack of concentration among school children 5 to 15 years of age was found to be 6.4%.Lack of concentration was the main cause in 81.7% of children in academic performance. Also it was found in the same study that moderate level of concentration was present in 7.7% and mild concentration in 7.4%. The study concluded that study was associated with both gender.

Nancy dhas (2008) had conducted a comparative studyto assess the level of concentration among primary school children ofSalem, Tamil Nadu age group 6-12 years of employed and unemployed mothers. One hundred samples were selected through non-probability convenience sampling technique – 50 employed mothers and 50 unemployed mothers of primary school children. The result revealed that among the primary school children of employed mothers, 33 (66%) had below average academic performance and 17 (34%) had mild average in academic performance, and none had poor academic performance , whereas among the primary school children of unemployed mothers majority (78%) had mild academic performance , 11 (22%) had moderate academic performance , and none had severe academic performance. The study concluded that the lack of concentrationin primary school children are higher among employed mothers than in unemployed mothers.

CHAPTER – III

RESEARCH METHODOLOGY

Research methodology refers to the techniques used to structure a study and to analyze the information in a systematic fashion. Methodology includes the steps, procedure and strategies for gathering and analyzing the data in the research investigation.

This chapter consists of research approach, research design, variables, setting of the study, population, sample, sample size, sampling technique, criteria for sample selection, development and description of the tool, content validity, reliability of the tool, intervention, pilot study, procedure for data collection, plan for data analysis and protection of human rights.

RESEARCH APPROACH

The research approach used in this study was Quantitative research approach

RESEARCH DESIGN

The research design used in this study was True experimental pre test post test control group research design.

The research design is diagrammatically represented as follows,

Group	Pre test	Intervention	Post test
Experimental group	RO1	X	O2
Control group	RO3	-	O4

Figure 2: schematic representation of research design

Key:

R - Randomization.

O1 – Pre test of experimental group

O2- Pre test of control group

X -Concentration enhancement therapy.

O3- Post test ofexperimental group.

O4 - Post test of control group.

VARIABLES

Independent variable

Concentration enhancement therapy.

Dependent variable

Level of concentration

SETTING OF THE STUDY

Setting of the study refers to the area where the study was conducted. The prior information was gathered from (DEO- District educational office) about the list of Tamil medium primary schools present at nagercoil by orally. The concerned school correspondent and headmistress were approached and permission was obtained for conducting the study. Overall permissionwas obtain for four school in that two schools was allotted for experimental group and two for control group. The two schools allotted for experimental group areSt.Xavier and St.Francises primary school at Nagercoil. The St.Xavier primaryschool is situated in nagercoil which is 198 km away fromSri.K.Ramachandran Naidu College of Nursing. The total strength of theprimary school was488. The total number of students in 3rdstandard was 60.The St.Francises primary schoolis situated in vappamoodu junction which is 184 km away

from Sri.K.Ramachandran Naidu College of Nursing.The total strength of the primary school was 502.The total number of students in 3rdstandard was 80.

little flower and PunithaAlosious primaryschools atNagercoil,was allotted for control group.Thelittle flower school was located at a distance of 190kms from Sri.K.Ramachandran Naidu college of nursing, sankarankovil. Total strength of the school was 630. The total number of students in 3rdstandard was110.The PunithaAlosious primary schoolis situated in Christu nagar which is 188 km away from Sri. K. Ramachandran Naidu College of Nursing.The total strength of the primary school was 408.The total number of students in 3rdstandard was 50.

POPULATION

The study population comprises of school age children between the age group of 7-9 years and those who are studying in third standard from selected schools at Nagercoil.

SAMPLE

The students who were studying 3rdstandard inSt.Xavier,St.Francises,little flower and PunithaAlosious primary Schools at Nagercoil, who fulfilled the inclusion and exclusion criteria were selected as the samples.

SAMPLE SIZE

The sample size consists of sixty school age children, among them, thirty samples were allotted for control group from little flower and PunithaAlosious primary schools at Nagercoil and thirty samples were allotted for experimental group from St.Xavier and St.Francises primary School inNagercoil.

SAMPLING TECHNIQUE

Multi stage cluster random sampling technique followed by simple random samplingtechnique was used to select the samples.

STEP1:

The prior information was gathered from (DEO- District educational office) about list of Tamil medium primary schools by orally. Total Tamil medium primary schools in Nagercoil were fourteen. The concerned school correspondent and headmistress were approached and permission was obtained for conducting the study. Overall permission was obtained for four schools.

STEP2:

Total Tamil medium primary schools in Nagercoil were fourteen. The schools were selected by using simple random sampling technique followed by lottery method east, west zones are selected for experimental group and north, south zones are selected for control group.

STEP3:

Using lottery method samples were selected from various zones of Nagercoil. Total Tamil medium primary schools present at Nagercoil from various zones consists of east-2primary schools, west -4primary schools,north-4primary schools and south-4primary schools. Total primary schools were-14.

STEP4 : CONTROL GROUP

Control group contains two zones they are north and south zones. By using lottery method schools are selected from each zone. Total number of school present in the north zone is four by using simple random sampling technique Little flower primary school is selected and same method is used to select the school from south zone. South zone consist of four primary school .The selected primary school were

PunithaAlosious from south, Little flower primary school from north zone and total strength of the primary school is 630. The numbers of students in 3rd standard section A is 21,sectionB -23,sectionC -22,sectionD -24,sectionE- 20 and total number of third standard students were 110.The Modified ROVEN'S concentration assessment scale was used to screen the samplesconcentration level. The samples with average score 111-165 and below average score 56-110 is selected as samplewith class teacher assistance.After conducting pre test, the researcher got 53 samples from section'sA-21,B-23,C-22,D-24 and E-20.Samples from each section are selected randomly by using lottery method A-3,B-3,C-3,D-3&E-3,respectively total15 samples were selected.

PunithaAlosious primary school was selected from southzonetotal strengththe primary school is 408. The total number of students in 3rd standard was 50.The Modified ROVEN'S concentration assessment scale was used to screen the samples for the level of concentration of the sample with average score 111-165 and below average score 56-110 will be selected as sample with class teacher assistance.After conducting pre test, the researcher got 19 samples from section's A-6,B-7&C-6,Samples from each section are selected randomly, section A-5,B-5andC-5,respectively 15 samples are totally selected. Finally from both the schools 30 samples were selected for control group.

STEP5 : EXPERIMENTAL GROUP

The techniques used in control group were adopted to select the experimental group samples. The study was conducted in St.Xavier primary School Nagercoil selected from east zone. The total strength of the school is 488. The total number of students in 3rd standard was 60.The Modified ROVEN'S concentration assessment scale were used to screen the samples for the level of concentration of the sample with

average score 111-165 and below average score 56-110will be selected as sample with class teacher assistance.After conducting pre test the researcher got 25 samples from section's(A-8,B-8&C-9) are collected respectively. Samples from each section are selected randomly by using lottery method section(A-5,B-5 andC-5),overall 15 samples are selected.St.Francis primary School were selected from west zone. The total strength of the school was 502. The total number of students in 3rd standard was 80.The Modified ROVEN'S concentration assessment scale was used to screen the samples for the level of concentration of the sample with average score 111-165 and below average score 56-110 will be selected as sample with class teacher assistance.After conducting pre test the researcher got 32 samples from section's(A-10,B-12andC-10).Samples from each section are selected randomly using lottery method A-5,B-5&C-5,totally 15 samples wereselected. Overall samplesselected from both the schools for experimental group were 30.

CRITERIA FOR SAMPLE SELECTION

The samples were selected based on the following criteria:

INCLUSION CRITERIA

- Children who were with in the age group of 7-9years.
- The children who were studying 3rdstandard.
- Children who were willing to participate in the study.
- The children who were with average and below average level of concentration.
- Children who were studying Tamil medium.
- Both male and female children were included.

EXCLUSION CRITERIA

- The school age children with good & poor level of concentration.
- The school age children who were physically challenged.
- School age children with any systemic illness.
- School age children with behaviour, conduct and learning disorder.
- School age children who were not willing to participate in the study.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

The tool consist of two sections

Section- A: Demographic Variables

Section -B: Modified Roven's concentration assessment scale for school age

SECTION- A: DEMOGRAPHIC VARIABLES

Section A deals with demographic variables such asAge, sex, religion,area of residence,type of family, birth order,number of children in the family,educational status of mother, educational status of father, occupation status of father, occupation status of mother, family income and the child residing with.

SECTION- B: MODIFIED ROVEN'S ASSESSEMENT SCALE

Section- B: consists of Modified Roven's assessment scale to assess the level of concentration. It has 55 items. It is a 4 point scale.

SCORING PROCEDURE

Section- B: consists of Modified Roven's assessment scale meant for school age childrento assess the level of concentration which contains 55 items. It is a four point scale. Each item was scored as 4 good, 3 average, 2 below average, 1 poor. Total score is 220.

The score was represented as follows:

SCORE	INTERPRETATION
1– 55	Poor
56 – 110	Below average
111 – 165	Average

166 – 220	Good

INTERVENTION

The concentration enhancement therapyis a form of physical exercise,colour cancellation and letter cancellation.The concentration enhancement therapy is given for 30 minutes every morning continuously for 20days.

STEPS OF PROCEDURE:

- The researcher had established rapport with the school age children.
- The participants in the experimental group were made to stand in 5 members at 3 rows with 2 feet distance.
- The investigator had divided the experimental group into two groups (I AND II). Each group has 15 school age children.
- Experimental Group I and II can practice concentration enhancement therapy every day morning according to time schedule.
  The schedule for the intervention as follows:

Groups	Time
I Group	9.30-10am
II Group	11-11.30am

- The investigator demonstrated the concentration enhancement therapy to the experimental group daily for 30 minutes and the experimental group had done the return demonstration for the period of 20days in the presence of investigator.
- The researcher told the school age children to do physical exercise for 20 minutes.
- The researcher guided the school age children to do letter cancellation task and colour cancellation task for10 minute.
- Finally the researcher told the school age children to sit straight and get relaxation to close the session.
- Totally each session was conducted for 30 minutes.

1. Physical exercise -20minutes

2. Letter cancellation -5minutes
3. Color cancellation -5minutes

Each day 30 minutes the sessions were commenced with all thirty samples. Make them to sit in three rows in front of the researcher .

- **Physical exercise**

Step:1 Bending exercise

- Stand straight with your legs together
- Raise your hands above your head
- Bow forwards with out flexing your knees touch the tip of the toes with your hands.
- Repeat this for 5 minutes

Step:2 Extension exercise

- Stand straight with your legs together
- Extend to your head towards side.
- Extend your hands towards your shoulder level
- Come back to normal position repeat this for 5 minutes

Step:3 Running

Makes the children to run around the ground in a order for 10 minutes.

- **Letter cancellation**

Each sample will be provided with two sheets, first sheet consists of only capital alphabets where second sheet consists of both capital and small alphabets were printed in a random manner. This activity comprised of three tasks .First task consist of canceling only the capital letters within one minute. Second task involved cancelling the small letters before and after a double space within 45 seconds .Third task comprised of canceling both small and capital letters as well as the letters before

and after each double space within 30 seconds .Overall time frame were been reduce from one minute, 45seconds and 30seconds respectively.

- **Color cancellation**

A sheet consists of five colors they are red, blue,yellow,black and gray. Each color consists of 30 dots. Total dots present in the sheet are 150 colored. The dots were arranged equidistant from each other in a random order .There are two parts of the test –simple color canceling and complex color cancellation .The student was first asked to name or match the colored dots in order to test his or her color vision .In the simple task the subject was instructed to cross out all the black dots with pencil provided as fast as they can. The numbers of missing dots arerecorder.

CONTENT VALIDITY

Content validity of the tool is established after obtaining certification from four nursing experts and medical experts in the field of pediatrics and psychiatry. The slight modifications were done as per the suggestion of the experts in the tool.

RELIABILITY

Reliability of the tool is established by test-retest method by using Karl Pearson's correlation coefficient.The reliability score was r=0.89 which showed a highly positive correlation of the tool.The reliability of the tool obtained is found to be feasible to conduct the main study.

PILOT STUDY

Pilot study is a rehearsal of the main study. Pilot study was conducted after obtaining formal permission from the Principal, research and ethical committee of Sri. K. Ramachandran Naidu College of nursing and from the Headmaster of theselected primary schools. Prior information's was gathered from DEO-office. Total Tamil medium primary schools at swamythoppu is eight. The selected schools are Kothiyadi primary school, S.M.S.M. primary school, St.Marry primary school, and S.M.R.V primary school. The pilot study was conducted in four primary school at Swamythoppu, from 26.7.14 to 31.7.14. The school was located at a distance of 94kms from Sri. K. Ramachandrannaidu College of nursing, Sankarankovil.

Multi stage cluster sampling technique was used to select the samples. Each zone consist of two school, the experimental group consists of east and west zones.Kothiyadi school is from east zone total number of students in 3rd, standard was 60 .Total number of students in 3rdstandard was 40samples from S.M.S.M present at west zone. Sample selected for control group are from north and south zone they are St.Marry primary school from northtotal number of students in 3rd, standard was 50.S.M.R.Vprimary school from south zone total number of students in 3rdstandard was 40.

The investigator introduced herself to the students and established rapport with the school age children and explained about the study and got informed consent. Modified ROVEN'S assessment scale was given to assess the pre test level of concentration by using with the help of class teacher assistance. Based on the scores and inclusive criteria researcher got total-40 students from each zone 10 students were selected. The total number of sample selected was 6.Out of the 6 samples 3 of them were allotted to experimental group and 3 of them were allotted to control group. Concentration enhancement therapy were given for 30 minutes once a day for 5 days

in the morning from 9.30am to10.00am only to the experimental group. At the end of the intervention post test level of concentration was assessed by using Modified ROVEN'S assessment scale with the help of class teacher assistance and scores of both the group's results of the study was assessed for its effectiveness.

The pilot study revealed that, there was a highly significant difference between the post test level of concentration among experimental and control group of school age children at P< 0.05 level.

The result of the pilot study showed that, the study was feasible and practicable to conduct the main study. There was no modification made in the tool after the pilot study.

PROCEDURE FOR DATA COLLECTION

The investigator got permission from the Principal and research ethical committee of Sri.K.Ramachandran Naidu College of Nursing, Sankarankovil and from the Headmaster of the St.Xavier, St.Francises, little flower and PunithaAlosious primary Schools at Nagercoil respectively.Data collection were done in St.Xavier, St.Francises, little flower and PunithaAlosious primary schools at Nagercoil from 01.08.2014 to 31.08.2014 every day morning from 9.30am to 10.00 am&11.00am to11.30 am.

It consists of three phases.

Phase I :-

The researcher introduced herself to the students and established rapport with the students and explained about the study. The participants are assured that no physical or emotional harm would be done to them during the course of the study. The investigator obtained an informed consent from each sample.School correspondent and headmistress were approached and permission was obtained for conducting the

study. Overall permission was obtained for four schools.Simple random sampling technique was used to select the samples. Samples were selected from various zones of Nagercoil. Total Tamil medium primary schools present at nagercoil from various zones consists of east-2primary schools, west -4primary schools,north-4primary schools and south-4primary schools. Total primary schools are-14.

Phase II :-

Multi stagerandom sampling technique followed by simple random sampling technique was used to select the experimental group.St.Xavierprimary School Nagercoil selected from east zone. The total strength of the school was 488. The total number of students in 3rd standard was 60.The Modified ROVEN'S concentration assessment scale was used to screen the samples for the level of concentration of the sample with average score 111-165 and below average score 56-110 will be selected as sample with class teacher assistance.After conducting pre test, the researcher got 25 samples from section's (A-8, B-8&C-9).Samples from each section are selectedrandomlyoverall 15 samples are selected from section(A-5,B-5&C-5)respectively.

St.Francis primary School were selected from west zone. The total strength of the school was 502. The total number of students in 3rd standard was 80.The same technique were used to select sample.After conducting pre test, the researcher got 32 samples from section's (A-10,B-12&C-10) respectively. Samples from each section are selected randomly A-5,B-5andC-5,total 15 samples are selected. Overall samples selected from both the schools were 30 for the experimental group.

Concentration enhancement therapy was given only to the experimental group for 20 days. The experimental group were further divided into two subgroups and each group consists of 15 members. The concentration enhancement therapy were

given for half an hour each day morning as one session. The post test level of concentration were assessed by using the same scale for both the groups.

The schedule for the intervention as follows:

Groups	Time
I Group	9.30-10am
II Group	11-11.30am

The post test is done on the 21th day of intervention for experimental group. The collected data are analyzed and inter pretated.

Phase III :-

Control group contains two schools. By using lottery method schools are selected from each zone. Total number of school present in the north zone is four by using lottery method Little flower primary school is selected and same method is used to select the school from south zone. South zone consist of four primary schools by using lottery method selected school was PunithaAlosious primary school .Little flower primary School from north zone. The total strength ofthe primary school is 630. The numbers of students in 3rd standard section's were(A-21,B -23,C -22,D -24&E- 20) total number of third standard students were 110.The technique used in experimental group were used to select the samples.After conducting pre test the researcher got samples from each sections were (A-9,B-12,C-10,D-11&E-11),totally 53 samples. Samples from each section were selected randomly A-3,B-3,C-3,D-3andE-3,overall 15 samples were selected.

PunithaAlosious primary school was selected from south zonetotal strengththe primary school is 408. The total number of students in 3rd standard was 50.Thetechnique used in experimental group are used to select the samples.After conducting pre test, the researcher got samples from each section's were A-6,B-

7andC-6,totally 19 samples. Samples from each section were selected randomly (A-5, B-5&C-5), totally 15 samples are selected. Overall 30 samples were selected from both the school for control group.

No intervention was given to the control group.At the 22nd day post test level of concentration were assessed with the same tool with the help of class teacher assistance and the collecteddata was analyzed.

PLAN FORDATAANALYSIS

Both descriptive and inferential statistics were used for data analysis.

Descriptive Statistics

- ♣ Frequencyand percentage distribution was used to analyze the demographic variables.
- ♣ Frequency and percentage distribution was used to assess the pre test and post test level of concentration among experimental and control group of school age children.
- ♣ Mean and standard deviation was used to assess the effectiveness of concentration enhancement therapy among school age children.

Inferential Statistics:

- ♣ Unpaired‘t’ test was used to compare the post test level of concentrationof experimental and control group ofschool age children.
- ♣ Paired‘t’ test was used to compare the pre and post test level of concentrationof the experimental group ofschool age children.
- ♣ Chi-square test was used to find out the association between the post test level of concentration of school age children in the experimental and control group with their selected demographic variables.

PROTECTION OF HUMAN RIGHTS

Ethical clearance was given by the Principal,Research and ethical committee of Sri.K.Ramachandran Naidu College of Nursing and got formal permission from the Headmaster of St.Xavier,St.Francises, little flower and PunithaAlosious primary schools. Informed consent was obtained from each study participants. The participants were informed that, the responses provided by them will be kept confidential. The participants were assured that, there will not be any harm caused to them during the course of the study.

Figure3:Schematic presentation of multistage cluster randomsampling technique

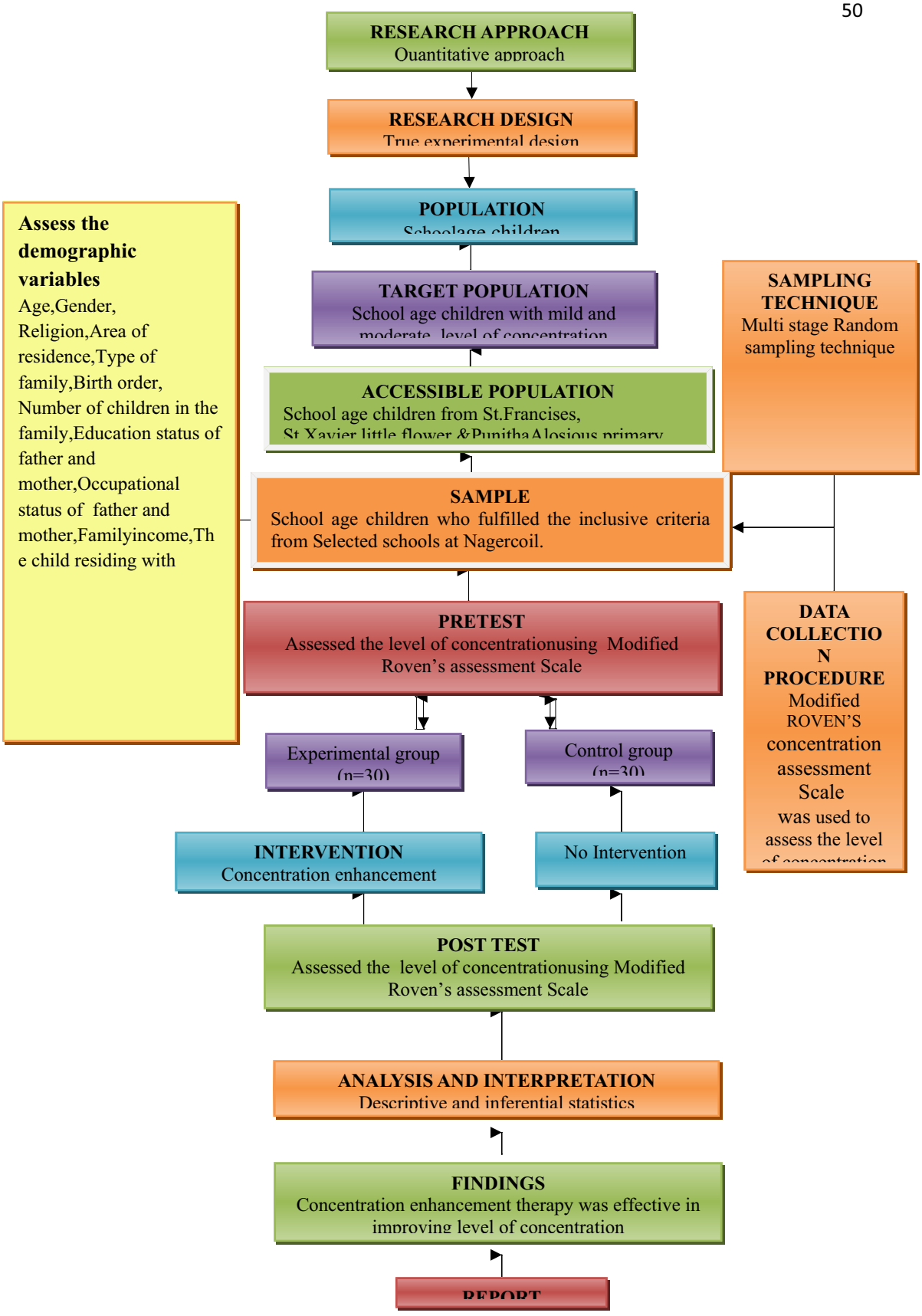

Figure 4: Schematic representation of research methodology

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data related to assessing the effectiveness of concentration enhancement therapy on concentration among school age children in selected schools at Nagercoil.

Descriptive and inferential statistics were used for analyzing the data on the basis of the objectives of the study.

The data has been tabulated and organized as follows.

ORGANIZATION OF DATA

Section A: Description of demographic variables in experimental and control group of school age children.

- Frequency and percentage distribution of demographic variables of school age children with respect to age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing within experimental and control group.

Section B: Assessment of the level of concentration in experimental and control group of school age children.

- Frequency and percentage distribution of pre test level of concentration in experimental and control group of school age children.
- Frequency and percentage distribution of post test level of concentration in experimental and control group of school age children

Section C: Comparison of the effects of concentration enhancement therapy on concentration among experimental and control group of school age children.

- Mean and standard deviation of the post test level of concentration among experimental group and control group of school age children.
- Mean and standard deviation of pre and post test level of concentration among experimental group of school age children.

Section D: Association between the post test level of concentration among school age children in experimental and control group with their selected demographic variables.

- Association between the post test level of concentration among school age children in experimental group with their selected demographic variables such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with.
- Association between the post test level of concentration among school age children in control group with their selected demographic variables such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with.

SECTION A: DESCRIPTION OF DEMOGRAPHIC VARIABLES IN EXPERIMENTAL AND CONTROL GROUP OF SCHOOL AGE CHILDREN.

Table-1:- Frequency and percentage distribution of demographic variables of school age children with respect to age, gender, religion, area of residence, type of

family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing within experimental and control group.

(N=60)

Sl. No	**Demographic variables**	**Experimental Group**		**Control Group**	
		F	**%**	**F**	**%**
1.	**Age**				
	1. 7years	8	26.67	6	20
	2. 8 years	14	46.67	19	63.33
	3. 9 years	8	26.67	5	16.67
2.	**Gender**				
	1. Male	16	53.33	21	70
	2. Female	14	46.67	9	30
3.	**Religion**				
	1. Hindu	16	53.33	21	70
	2. Christian	10	33.33	9	30
	3. Muslim	4	13.34	0	0
4.	**Area of Residence**				
	1. Rural	20	66.67	28	93.33
	2. Urban	10	33.33	2	6.67

5.	**Type of Family** **1.** Nuclear **2.** Joint	21 9	70 30	22 8	73.33 26.67
6.	**Birth order** 1. First 2. Second 3. Third and above	13 11 6	43.33 36.67 20	16 10 4	53.33 33.33 13.34
7.	**Number of Children in Family** 1. One 2. Two 3. Three and more	61 68	20 53.33 26.67	51 69	16.67 53.33 30
8.	**Education Status of Father** **1.** Illiterate **2.** Primary **3.** Higher secondary **4.** Graduate and above	41 13 13 0	13.34 43.33 43.33 0	01 16 11 4 0	05 33.33 46.67 0
9.	**Education Status of Mother** 1. Illiterate 2. Primary 3. Higher secondary 4. Graduate and above	51 17 8 0	16.67 56.67 26.67 0	02 10 10 0	06.67 33.33 0

10.	**Occupational Status of Father** **1.** Coolie **2.** Private employee **3.** Government employee **4.** Business	14	46.67 90 07 3.33	16	53.33 60 08 6.67
11.	**Occupational Status of Mother** 1. Home maker 2. Private employee 3. Government employee 4. Coolie	19	63.33 30 08 3.33	20	66.67 60 04 3.33
12.	**Family Income** **1.** Below Rs.5000/- **2.** Rs.5001/- to Rs.10000/- **3.** Rs.10001/- to Rs.15000/- **4.** Rs.15001/- and above	1	13.33 42 50 6.67	1	02 54 6.67 3.33
13.	**The Child Residing with** **1.** With both father and mother **2.** With single parent **3.** In hostel **4.** With grandparents / guardian	3	76.67 24 03.33 01 0	1	25 04 6.67 01 3.33

Table 1describes the frequency and percentage distribution of demographic variables of school children with respect to age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with in experimental and control group.

With regard to age, in experimental group, out of 30 samples 8 (26.67%) of the school children belongs to the age 7years, 14 (46.67%) of the school children belongs to the age 8 years and 8 (26.67%) of the school children belongs to the age 9 years. Whereas in control group ,out of 30 samples 6 (20%) of the school children belongs to the age 7 years, 19 (63.33%) of the school children belongs to the age 8 years and 5 (16.67%) of the school children belongs to the age 9 years.

With respect to sex, in experimental group, out of 30 samples 16 (53.33%) of them were males and 14 (46.67%) of them were females. Whereas in the control group, out of 30 samples 21 (70%) of them were males and 9 (30%) of them were females.

With respect to religion, in the experimental group, out of 30 samples 16 (53.33%) of them were Hindus, 10 (33.33%) of them were Christians, 4 (13.34%) of them were Muslims. Whereas in the control group, out of 30 samples 21 (70%) of them were Hindus, 9 (30%) of them were Christians and none of them were Muslims.

With respect to area of living out of 30 samples, 24(80%) of them were from rural area and 6(20%) of them were from urban area.

With respect to area of residence,in the experimental group out of 30 samples, 20(66.67%) of them were from rural area and 10(33.33%) of them were from urban

area. Whereas in the control group, out of 30 samples, 28(93.33%) of them were from rural area and 2(6.67%) of them were from urban area.

With respect to type of family, in the experimental group out of 30 samples, 21(70%) of them living in nuclear family and 9(30%) of them living in joint family. Whereas in the control group, out of 30 samples, 22(73.33%) of them living in nuclear family and 8(26.67%) of them living in joint family.

With regard to birth order, in the experimental group, out of 30 samples 13 (43.33%) of them were the first child, 11 (36.67%) of them were the second child, and 6 (20%) of them belongs to the category of third and above. Whereas in the control group, out of 30 samples 16 (53.33%) of them were the first child, 10 (33.33%) of them were the second child, and 4 (13.34%) of them belongs to the category of third and above.

With respect to number of children, in the family in the experimental group, out of 30 samples 6 (20%) of them have one children in family, 16 (53.33%) of them were having two children in family and 8 (26.67%) of them were having three and more children. Whereas in the control group, out of 30 samples 5 (16.67%) of them have one children in family, 16 (53.33%) of them were having two children in family and 9 (30%) of them were having three and more children.

With respect to education status of father,in the experimental group, out of 30 samples 4 (13.34%) of them having illiterate father,13 (43.33%) of them were having father with primary school education, 13 (43.33%) of them were having father with higher secondary education and none of them having father with graduate and above. Whereas in the control group, out 30 samples 16 (53.33%) of them were having father with primary school education, 14 (46.67%) of them were having father with higher

secondary education and none of them having father with illiterate and graduate and above.

With respect to education status of mother, in the experimental group, out of 30 samples 5 (16.67%) of them having illiterate mother, 17 (56.67%) of them were having mother with primary school education, 8 (26.67%) of them were having mother with higher secondary education and none of them having mother with graduate and above. Whereas in the control group, out 30 samples 20 (66.67%) of them were having mother with primary school education, 10 (33.33%) of them were having mother with higher secondary education and none of them having father with illiterate and graduate and above.

With respect to occupational status of father, in the experimental group, out of 30 samples 14 (46.67%) of them having father with coolie worker, 9 (30%) of them were having father with private employee, 7(23.33%) of them were having father with business and none of them having father with government employee. Whereas in the control group, out 30 samples 16 (53.33%) of them having father with coolie worker, 6 (20%) of them were having father with private employee, 8 (26.67%) of them were having father with business and none of them having father with government employee.

With regard to occupational status of mother, in the experimental group, out of 30 samples 19 (63.33%) of them having mothers were home maker, 3 (10%) of them were having mother with private employee, 8 (26.67%) of them were having mother with coolie worker and none of them having mother with government employee. Whereas in the control group, out 30 samples 20 (66.67%) of them having mothers were home maker, 6 (20%) of them were having mother with private

employee, 4 (13.33%) of them were having mother with coolie worker and none of them having mother with government employee.

With respect to family income, in the experimental group, out of 30 samples 4 (13.33%) of them having income below Rs.5000/-, 21 (70%) of them were having income between Rs.5001/- to Rs.10000/-, 5 (16.67%) of them were having income between Rs.10001/- to Rs.15000/- and none of them having income Rs.15001/- and above. Whereas in the control group, out of 30 samples 21 (70%) of them were having income between Rs.5001/- to Rs.10000/-, 5 (16.67%) of them were having income between Rs.10001/- to Rs.15000/-, 4 (13.33%) of them having income Rs.15001/- and above and none of them having income below Rs.5000/-.

With regard to the child residing with, in the experimental group, out of 30 samples 23 (76.67%) of them were residing with father and mother, 4 (13.33%) of them were residing with single parent 3 (10%) of them were residing with grandparents / guardian and none of them residing in hostel. Whereas in the control group, out of 30 samples 21 (70%) of them were residing with father and mother, 5 (16.67%) of them were residing with single parent 4 (13.33%) of them were residing with grandparents / guardian and none of them residing in hostel.

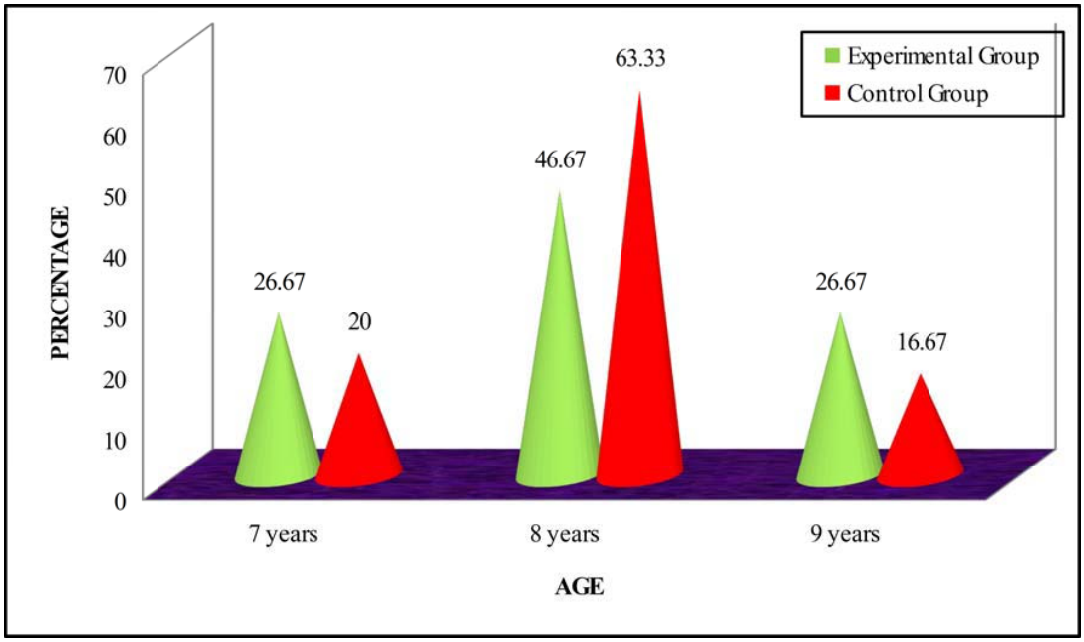

Figure 5: Percentage distribution of age of school age children in experimental and control group.

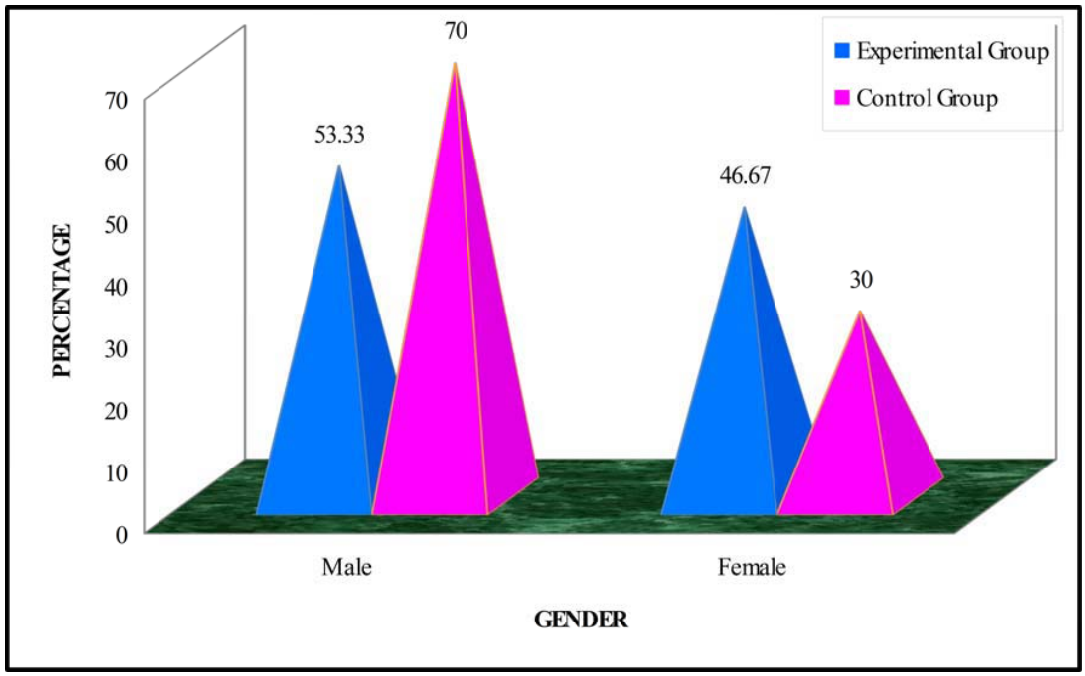

Figure 6: Percentage distribution of gender of school age children in experimental and control group.

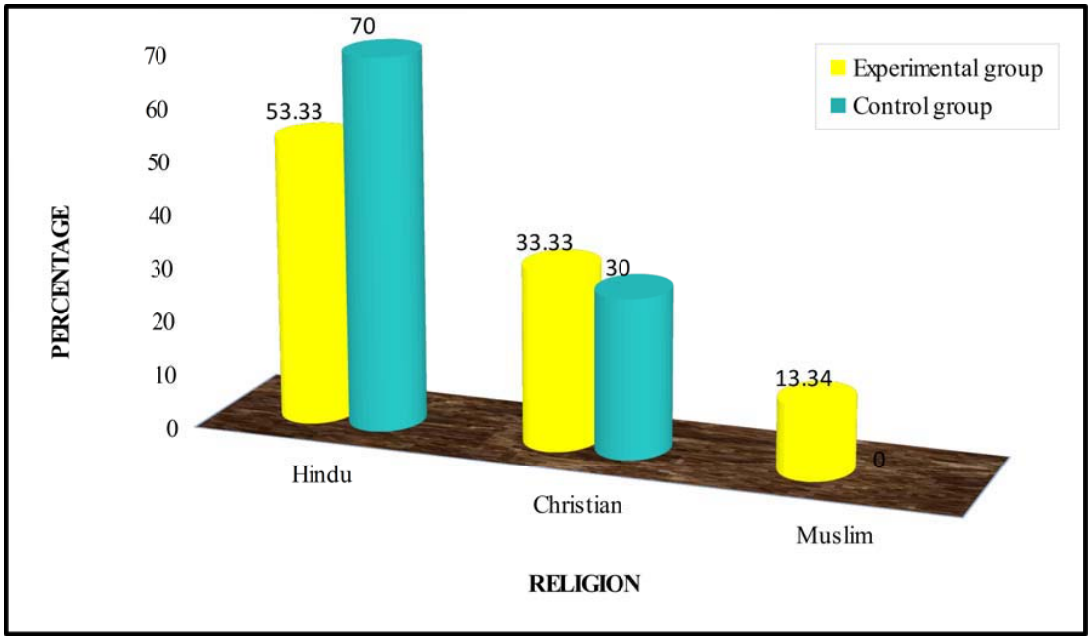

Figure 7: Percentage distribution of religion of school age children in experimental and control group.

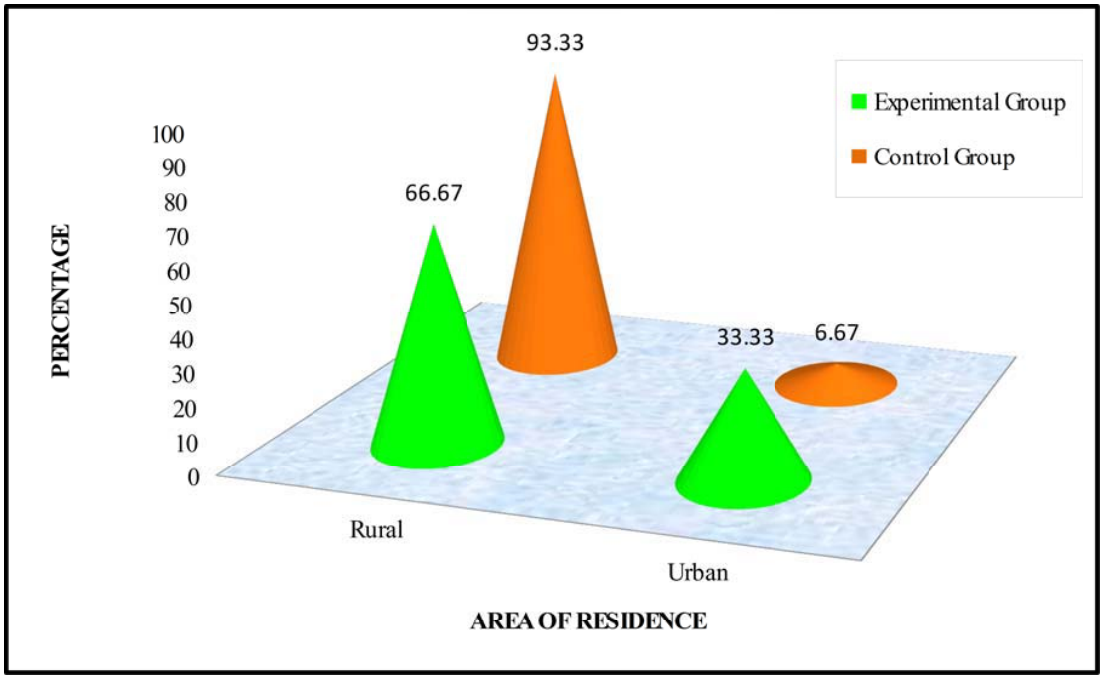

Figure 8: Percentage distribution of area of residence of school age children in experimental and control group.

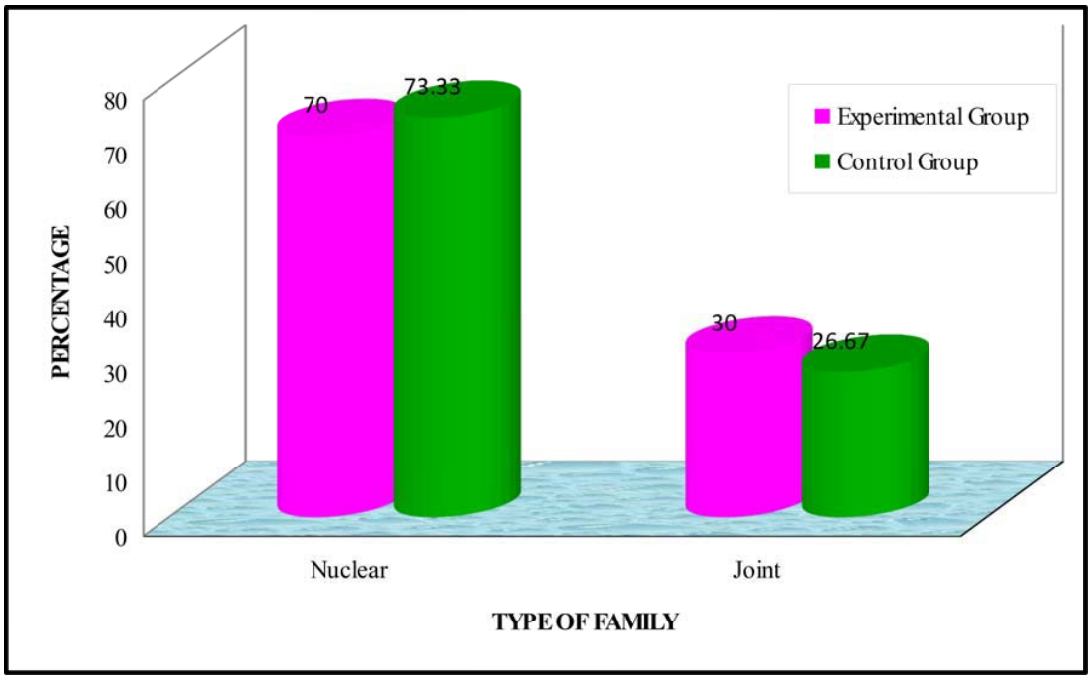

Figure 9: Percentage distribution of type of family of school age children in experimental and control group

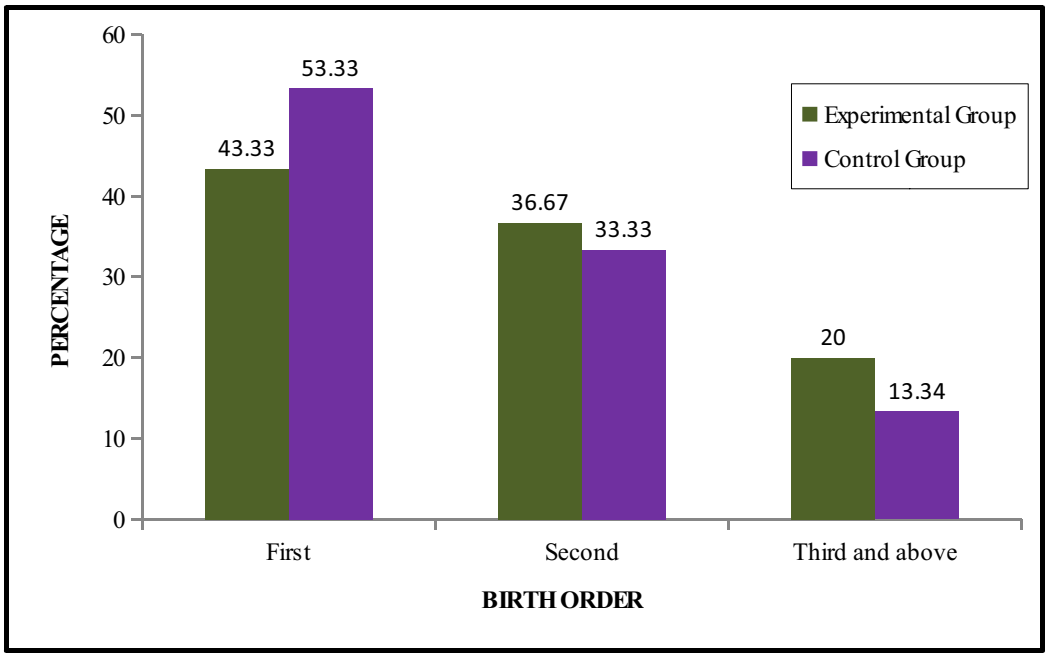

Figure 10: Percentage distribution of birth order of school age children in experimental and control group

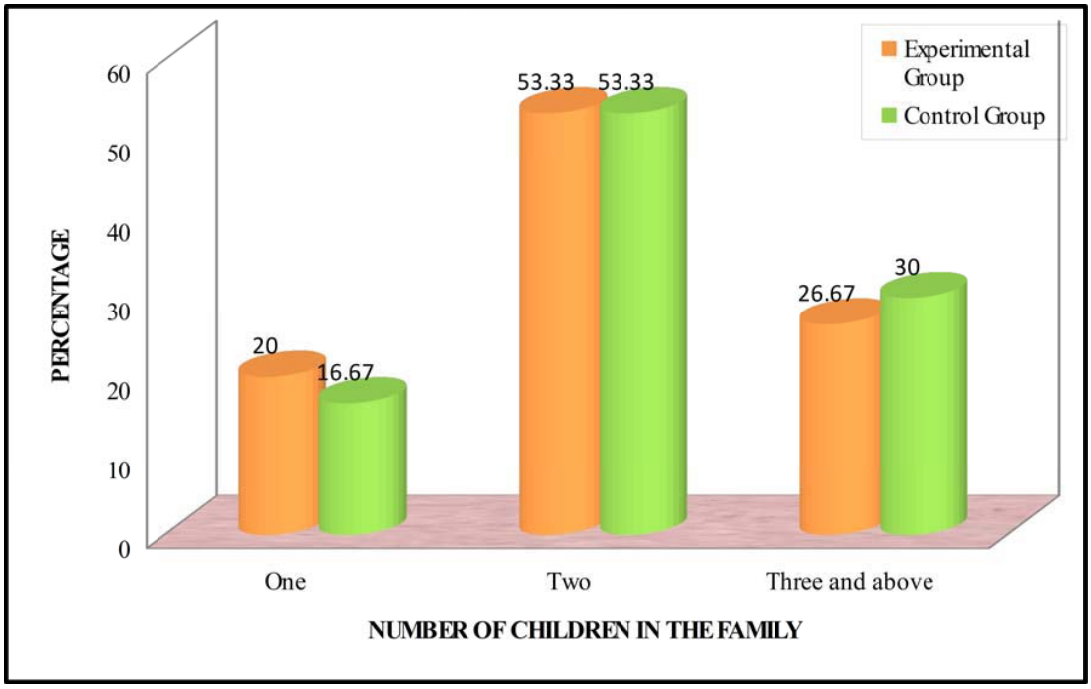

Figure 11: Percentage distribution of number of children in the family in experimental and control group

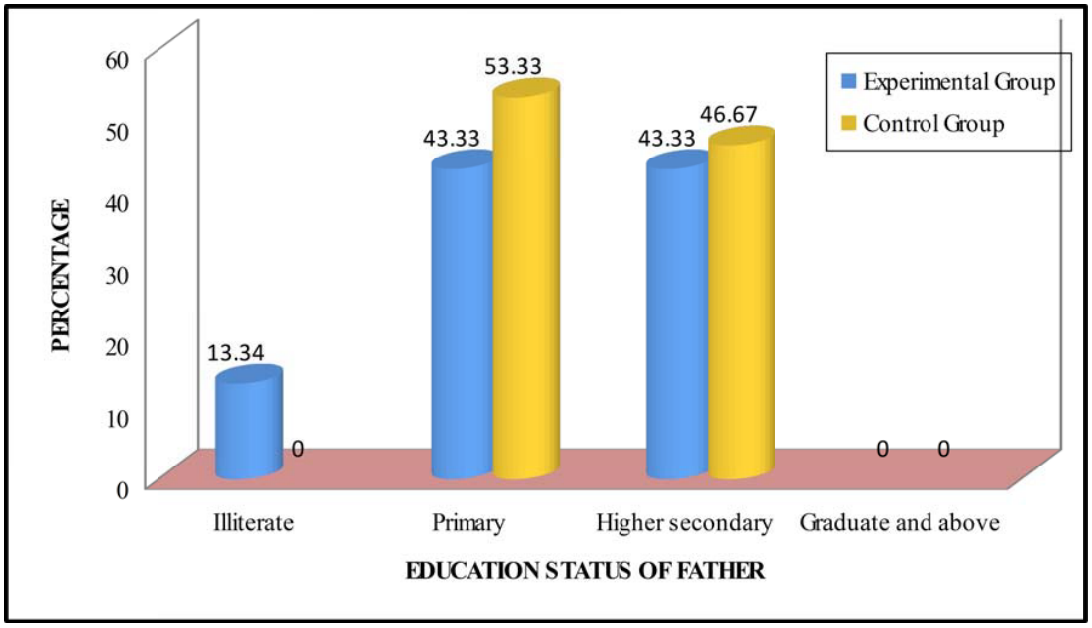

Figure 12: Percentage distribution of education status of father of school age children in experimental and control group.

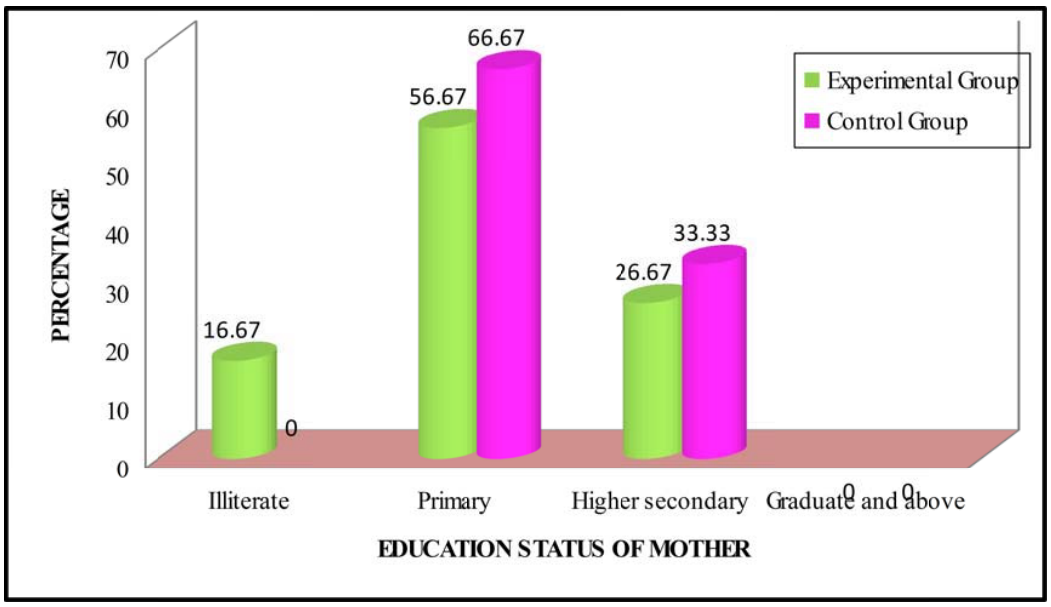

Figure 13: Percentage distribution of education status of mother of school age children in experimental and control group.

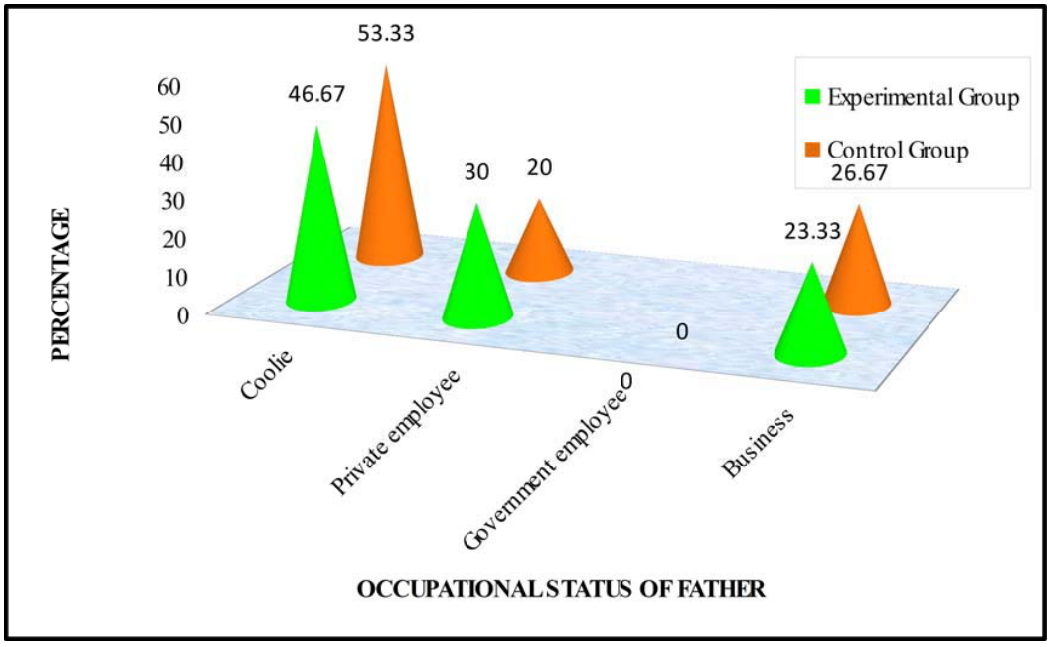

Figure 14: Percentage distribution of occupation status of father of school age children in experimental and control group.

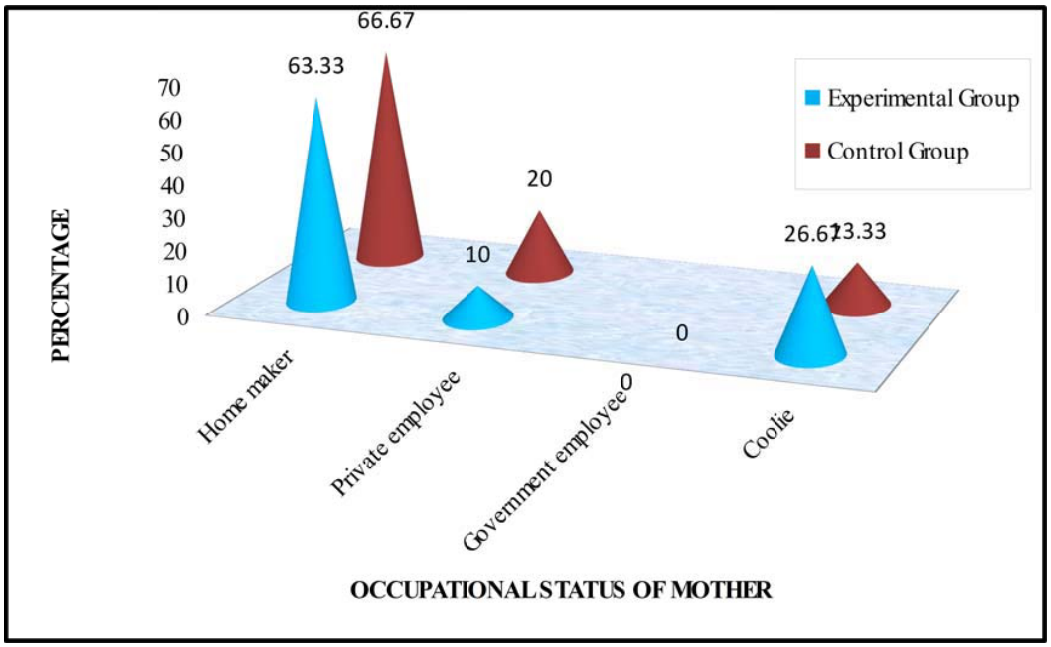

Figure 15: Percentage distribution of occupation status of mother of school age children in experimental and control group.

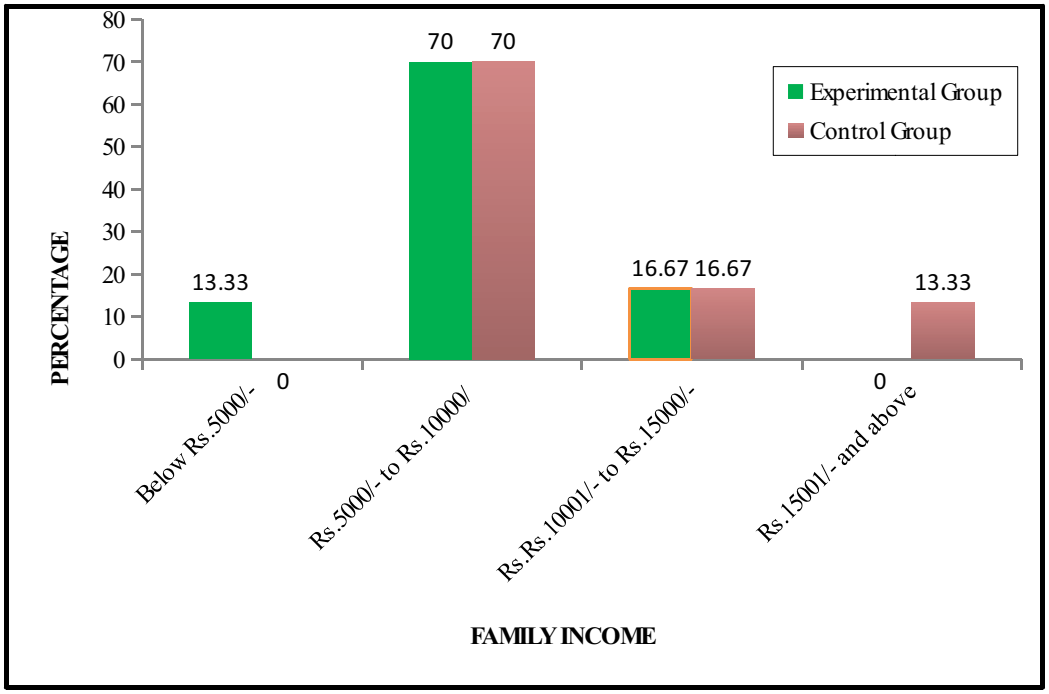

Figure 16: Percentage distribution of family income of school age children in experimental and control group.

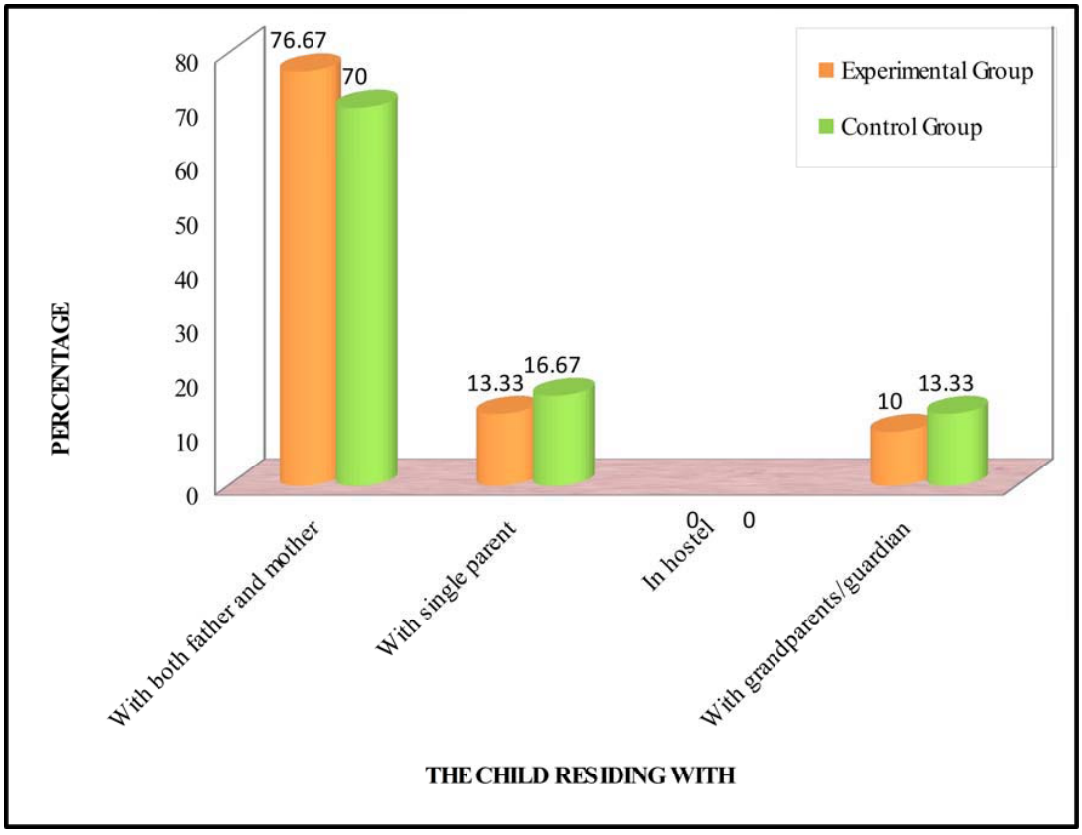

Figure 17: Percentage distribution of the child residing in experimental and control group.

SECTION B: ASSESSMENT OF THE LEVEL OF CONCENTRATION IN EXPERIMENTAL GROUP AND CONTROL GROUP OF SCHOOL AGE CHILDREN

Table-2: Frequency and percentage distribution of pre test level of concentration in experimental and control group of school age children.

(N=60)

S. No	Group	Pre test level of concentration							
		Good		Average		Below average		Poor	
		f	%	f	%	f	%	f	%
1.	Experimental Group	-	-	3	10	27	90	-	-
2.	Control Group	-	-	12	40	18	60	-	-

Table 2 reveals the frequency and percentage distribution of pre test level of concentration in experimental group and control group of school age children.

With regard to the pre test level of concentration,in experimental group, out of 30 samples, 3 (10%) of them were having average concentration, 27 (90%) of them were having below average concentration and none of them were having good and poor concentration.

With regard to the pre test level of concentration, in control group, out of 30 samples, 12 (40%) of them were having average concentration, 18 (60%) of them were having below average concentration and none of them were having good and poor concentration.

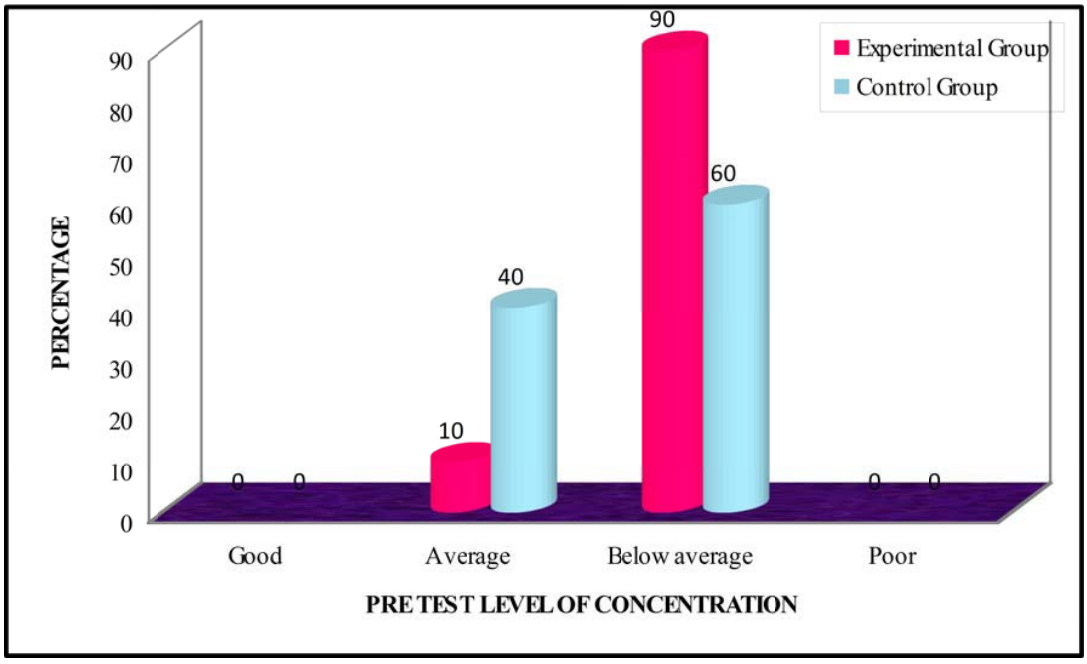

Figure 18: Percentage distribution of pre test level of concentration in experimental and control group of school age children.

Table-3: Frequency and percentage distribution of post test level of concentration in experimental group and control group of school age children.

(N=60)

S. No	Group	Post test level of concentration							
		Good		Average		Below average		Poor	
		f	%	f	%	f	%	f	%
1.	Experimental Group	5	16.67	13	43.33	12	40	-	-
2.	Control Group	-	-	13	43.33	17	56.67	-	-

Table 3 reveals the frequency and percentage distribution of post test level of concentration in experimental and control group of school age children.

With regard to the post test level of concentration, in experimental group, out of 30 samples,5 (16.67%) of them were having good concentration, 13 (43.33%) of them were having average concentration, 12 (40%) of them were having below average concentration and none of them were having poor concentration.

With regard to the post test level of concentration, in control group, out of 30 samples, 13 (43.33%) of them were having average concentration, 17 (56.67%) of them were having below average concentration and none of them were having good and poor concentration.

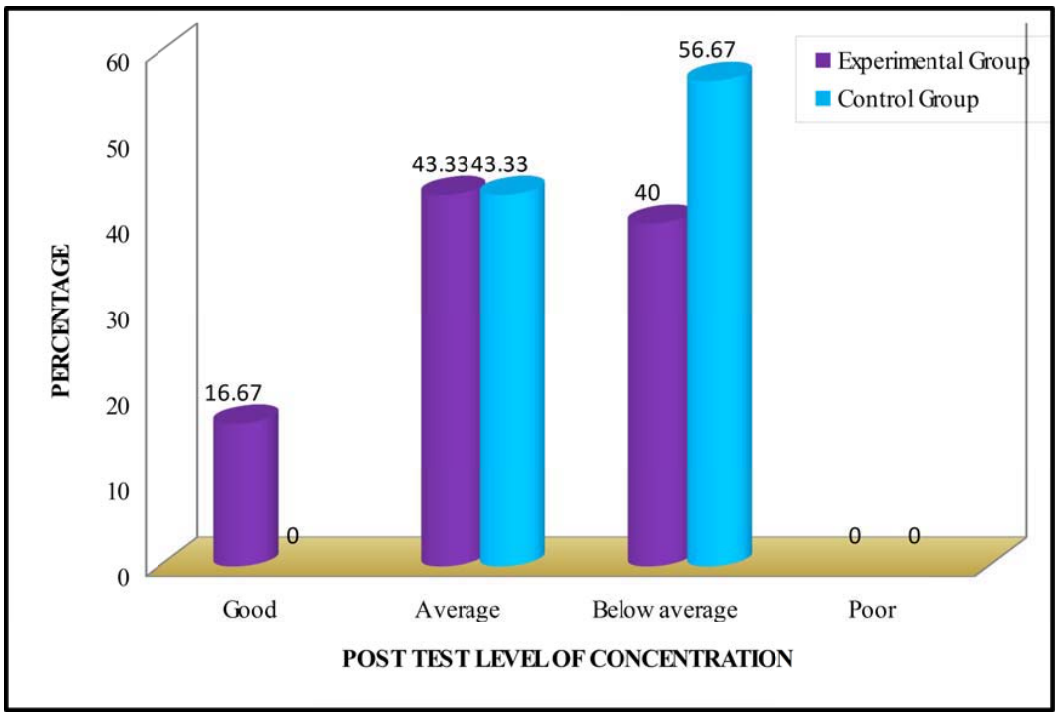

Figure 19: Percentage distribution of post test level of concentration in experimental and control group of school age children.

SECTION C: COMPARISON OF THE EFFECTS OF CONCENTRATION ENHANCEMENT THERAPY ON LEVEL OF CONCENTRATION AMONG EXPERIMENTAL AND CONTROL GROUP OF SCHOOL CHILDREN.

Table-4: Mean and standard deviation of the post test level of concentration among experimental group and control group of school children.

(N=60)

S. No	**Group**	**Post test**		**'t' test value**
		Mean	**Standard Deviation**	
1.	Experimental group	121.3	30.32	3.388 * S
2.	Control group	96.6	26.5	

S- Significant **P<0.05**

Table 4 shows the mean and standard deviation of the post test level of concentration among experimental group and control group of school age children.

In experimental group, the post test mean value was 121.3with the standard deviation of 30.32. In control group, the post test mean value was 96.6with the standard deviation of 26.5. The calculated't' test value was 3.388.

The above findings showed that, the mean post test level of concentration in experimental group was higher than the mean post test level of concentration in control group of school age children.

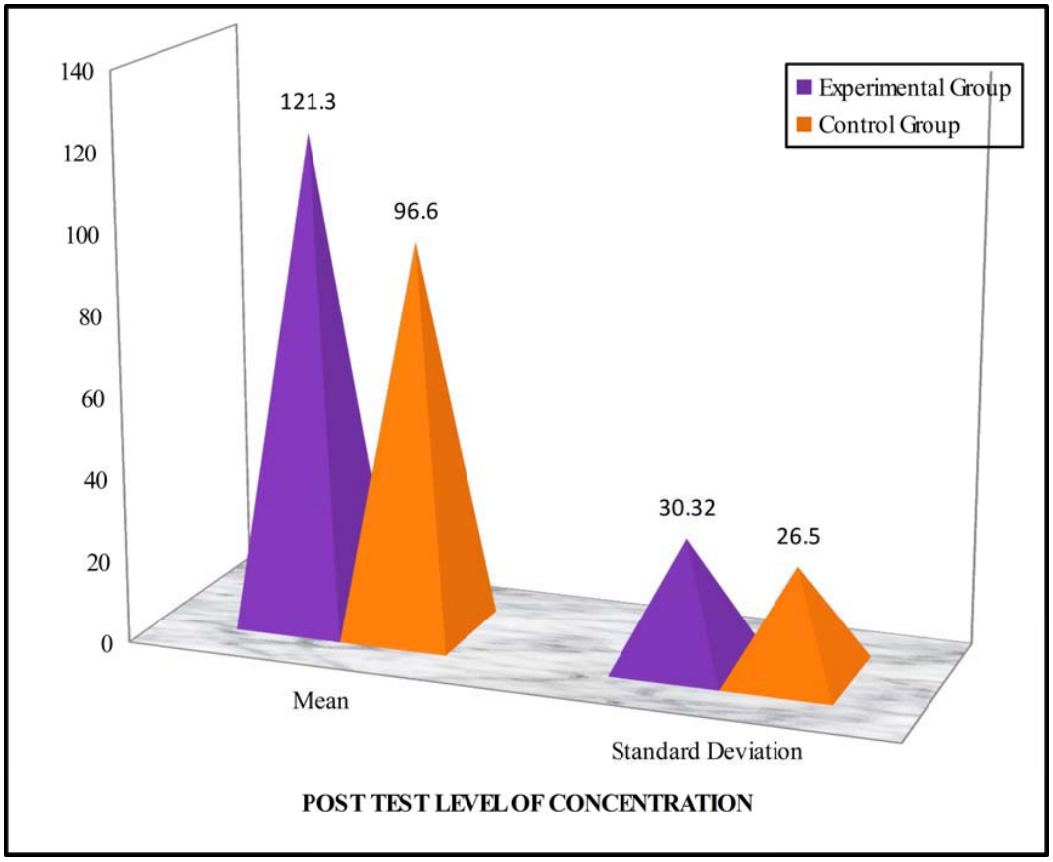

Figure 20: Mean and standard deviation of the post test level of concentration among experimental group and control group of school age children.

Table 5:- Mean and standard deviation of the pre and post test level of concentration among experimental group of school age children.

(N=60)

Group	Pre test		Post test		Mean Difference	't' test Value
	Mean	SD	Mean	SD		
Experimental group	80.16	19.10	121.33	30.32	41.16	6.291* S

S-Significant **P<0.05**

Table-5 The pre intervention mean score of concentration was 80.16 and the post intervention mean score of concentration status is 121.33and the corresponding't' test value was 6.291 among experimental group of school age children.

In experimental group, it showed the mean value of 80.16with the standard deviation 19.10 in pre test and the mean value of 121.33with the standard deviation 30.32 in post test. The mean difference was 41.16. The calculated't' test value was 6.291.

Hence there is a true difference between the pre $v_s$post.Post test level of concentration among the school children in experimental group were higher than the pre test level of concentration in experimental group.

The above findings support the research hypothesis, hence the researcher reject the null hypothesis and accepts the research hypothesis at $p<0.05$ level.

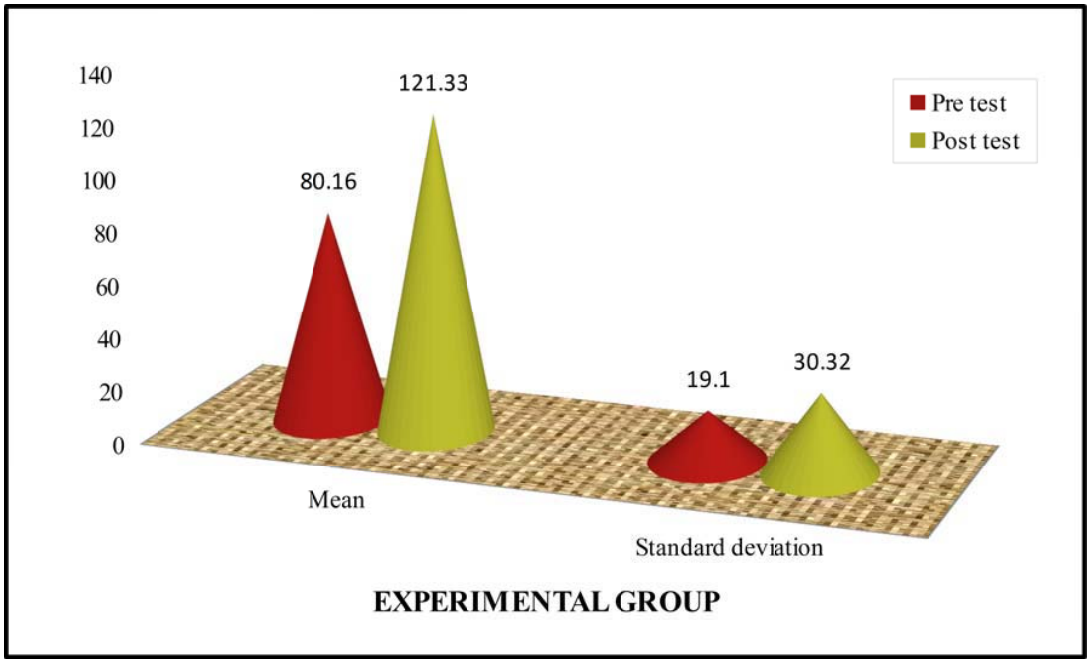

Figure 21: Mean and standard deviation of the pre and post test level of concentration among experimental group of school age children.

SECTION D: ASSOCIATION BETWEENTHE POST TEST LEVEL OF CONCENTRATION AMONG SCHOOL AGE CHILDREN IN

EXPERIMENTAL GROUP AND CONTROL GROUP WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

Table-6: Association between the post test level of concentration among school age children in experimental group with their selected demographic variables such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with.

(N=30)

Sl. No	**Demographic variables**	**Post test level of concentration**								**χ^2 value**
		Good		**Average**		**Below average**		**Poor**		
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	
1.	**Age** 1. 7 years 2. 8 years 3. 9 years	2 2 1	6 .7 6 .7 3 .3	4 7 2	1 3.33 2 3.33 6 .7	2 5 5	6 .7 1 6.67 1 6.67	- - -	- - -	# 2 .837 df=4 NS
2.	**Gender** 1. Male 2. Female	3 2	1 0 6 .7	9 4	3 0 1 3.33	4 8	1 3.33 2 6.67	- -	- -	# 3 .336 df=2 NS

3.	**Religion** 1. Hindu 2. Christian 3. Muslim	21 12	6 .7 3 .3 6 .7	57 71	1 6.67 2 3.33 3 .33	92 21	3 0 6 .7 3 .33	- - -	- - -	# 7 .871 df=4 NS
4.	**Area of Residence** 1. Rural 2. Urban	41	1 3.3 3 .3	76	2 3.33 2 0	93	3 0 1 0	- -	- -	# 1 .736 df=2 NS
5.	**Type of Family** **1.** Nuclear **2.** Joint	32	1 0 6 .7	94	3 0 1 3.33	93	3 0 1 0	- -	- -	# 0 .384 df=2 NS
6.	**Birth order** **1.** First **2.** Second **3.** Third and above	31 11	1 0 3 .3 3 .3	46 33	1 3.33 2 0 3 .3	64 22	2 0 1 3.33 6 .7	- - -	- - -	# 1 .779 df=4 NS

7.	**Number of Children in Family** **1.** One **2.** Two **3.** Three and more	0 4 1	0 1 3.3 3 .3	4 3 6	1 1 3.33 0 2 0	2 9 1	6 3 .67 0 3 .33	- - -	- - -	* 9 .92 d f=4 S
8.	**Education Status of Father** **1.** Illiterate **2.** Primary **3.** Higher secondary **4.** Graduate and above	0 2 3 0	0 6 .67 1 0 0	2 8 3 0	6 .67 2 6.67 1 0 0	2 3 7 0	6 .67 1 0 2 3.33 0	- - - -	- - - -	# 4 .920 d f=4 N S
9.	**Education Status of Mother** **1.** Illiterate **2.** Primary **3.** Higher secondary **4.** Graduate and above	0 4 1 0	0 1 3.3 3 .33 0	1 8 4 0	3 .33 2 6.67 1 3.33 0	4 5 3 0	1 3.33 1 6.67 1 0 0	- - - -	- - - -	# 4 .651 d f=1 N S
10.	**Occupational Status of Father** **1.** Coolie **2.** Private employee **3.** Government employee	4 1 0	1 3.3 3 .3	7 3 0	2 3.33 1 0	3 5 0	1 0 1 6.67	- - -	- - -	# 5 .141 d

	4. Business	0	0.00	3	0.10	4	0.00	-	-	f=4 **NS**
11.	**Occupational Status of Mother** **1.** Home maker **2.** Private employee **3.** Government employee **4.** Coolie	50 0 0	16.67 0.00	82 0 3	26.67 0.00 0.10	61 0 5	20.33 0.00 0.05	- - -	- - -	#4.723 df=4 **NS**
12.	**Family Income** 1. Below Rs.5000/- 2. Rs.5001/-to Rs.10000/ 3. Rs.10001/- to Rs.15000/ 4. Rs.15001/- and above	14 0 0	33.33 13.33 0.00	28 3 0	6.67 26.67 10.00	19 2 0	3.33 30 6.67	- - -	- - -	#1.833 df=4 **NS**
13.	**The Child Residing with** **1.** With both father and mother **2.** With single parent **3.** In hostel **4.** With grandparents / guardian	50 0 0	16.67 0.00 0.00	92 2 0	30 6.67 0.67	92 2 0	30 6.67 0.67	- - -	- - -	#2.171 df=2 **NS**

S-Significant, NS-Non Significant **P<0.05**

Table 6 shows the association between the post test level of concentration among school age children in experimental group with their selected demographic variables such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with.

The findings showed that, there was no significant association between the post test level of concentration among school age children in the experimental group with their demographic variables such as age, gender, religion, area of residence, type of family, birth order, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing except number of children in family at $p<0.05$ level.

Table 7: Association between the post test level of concentration among school age children in control group with their selected demographic variables such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with.

(N=30)

Sl. No	**Demographic variables**	**Post test level of concentration**								**χ^2 value**
		Good		**Average**		**Below average**		**Poor**		
		f	**%**	**F**	**%**	**f**	**%**	**f**	**%**	
1.	**Age** 1. 7 years 2. 8 years 3. 9 years	- - -	- - -	2 8 3	6 .67 2 6.67 1 0	4 1 1 2	1 3.33 3 6.67 6 .67	- - -	- - -	# .082 f=2 **S**	0 d **NS**
2.	**Gender** 1. Male 2. Female	- -	- -	1 0 3	3 3.33 1 0	1 1 6	3 6.67 2 0	- -	- -	# .523 f=1 **S**	0 d **NS**

3.	**Religion** 1. Hindu 2. Christian 3. Muslim	- - -	- - -	9 4 0	30 1 3.33 0	12 15 0	40 10 6.67	- - -	- - -	# 0 .065 df=1 NS
4.	**Area of Residence** 1. Rural 2. Urban	- -	- -	12 11	40 3 .33	16 11	53 3 3.33 .34	- -	- -	# 0 .388 df=1 NS
5.	**Type of Family** **1.** Nuclear **2.** Joint	- -	- -	10 3	33 1 3.33 0	12 15	40 1 6.67	- -	- -	# 0 .151 df=1 NS
6.	**Birth order** **1.** First **2.** Second **3.** Third and above	- - -	- - -	7 4 2	21 6 3.33 1 3.33 6 .67	9 6 2	30 6 0 6 .67	- - -	- - -	# 0 .119 df=2 NS

7.	**Number of Children in Family** **1.** One **2.** Two **3.** Three and more	- - -	- - -	2 7 4	6 .67 2 3.33 1 3.33	3 9 5	1 0 3 0 1 6.67	- - -	- - -	#	0 .028 d f=2 N S
8.	**Education Status of Father** **1.** Illiterate **2.** Primary **3.** Higher secondary **4.** Graduate and above	- - - -	- - - -	0 7 6 0	0 2 3.33 2 0 0	0 9 8 0	0 3 0 2 6.66 0	- - - -	- - - -	#	0 .295 d f=1 N S
9.	**Education Status of Mother** **1.** Illiterate **2.** Primary **3.** Higher secondary **4.** Graduate and above	- - - -	- - - -	0 9 4 0	0 3 0 1 3.33 0	0 1 1 6 0	0 3 6.67 2 0 0	- - - -	- - - -	#	0 .423 d f=2 N S
10.	**Occupational Status of Father** **1.** Coolie **2.** Private employee **3.** Government employee **4.** Business	- - - -	- - - -	6 4 0 3	2 0 1 3.33 0 1 0	1 0 2 0 5	3 3.33 6 .67 0 1 6.67	- - - -	- - - -	#	1 .662 d f=2 N S

11.	**Occupational Status of Mother** **1.** Home maker **2.** Private employee **3.** Government employee **4.** Coolie	- - - -	- - - -	9 3 0 1	30.3	11	3 1 3 0	6.67 10	- - - -	- - - -	# f=2 **S**	0.678 df **NS**
12.	**Family Income** **1.** Below Rs.5000/ **2.** Rs.5001/-to Rs.10000/ **3.** Rs.10001/-to Rs.15000/ **4.** Rs.15001/-and above	- - - -	- - - -	0 8 3 2	02 6.67 10 6.67	01 3 2 2	0 4 6 6 3.33 .67 .67		- - - -	- - - -	# f=2 **S**	0.872 df **NS**
13.	**The Child Residing with** **1.** With both father and mother **2.** With single parent **3.** In hostel **4.** With grandparents / guardian	- - - -	- - - -	10 2 0 1	3 3.33 6 .67 03 .3	11 3 0 3	3 1 6.67 0 01 0		- - - -	- - - -	# f=2 **S**	0.727 df **NS**

S-Significant,NS-Non Significant **P<0.05**

Table 7shows the association between the post test level of concentration among school age children in control group with their selected demographic variables

such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with.

The findings showed that, there was no significant association between the post test level of concentration among school age children in the control group with all demographic variables such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with at $p<0.05$ level.

CHAPTER-V

DISCUSSION

This chapter deals with the discussion of the data analyzed based on the objectives and hypothesis of the study. The problem stated was "A study to assess the effectiveness of concentration enhancement therapy on concentration among school age children."

Major findings of the study were:

- With regard to the pre test level of concentration in experimental group, out of 30 samples, 3 (10%) of them were having average concentration, 27 (90%) of them were having below average concentration and none of them were having good and poor concentration.
- With regard to the pre test level of concentration in control group, out of 30 samples, 12 (40%) of them were having average concentration, 18 (60%) of them were having below average concentration and none of them were having good and poor concentration.
- With regard to the post test level of concentration in experimental group, out of 30 samples, 5 (16.67%) of them were having good concentration, 13 (43.33%) of them were having average concentration, 12 (40%) of them were having below average concentration and none of them were having poor concentration.
- With regard to the post test level of concentration in control group, out of 30 samples, 13 (43.33%) of them were having average concentration, 17 (56.67%) of them were having below average concentration and none of them were having good and poor concentration.
- In experimental group, the post test mean value of concentration was 121.3 with the standard deviation of 30.32. In control group the post test mean value

was 96.6 with the standard deviation of 26.5. The calculated‘t’ test value was 3.388.

- ♣ In experimental group, it showed the mean value of concentration was 80.16with the standard deviation19.10 in pre test and the mean value of 121.33 with the standard deviation 30.32 in post test. The mean difference was 41.16. The calculated‘t’ test value was 6.291.
- ♣ There was no significant association between the post test level of concentration among school age children in the experimental group, with their demographic variables such as age, gender, religion, area of residence, type of family, birth order, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing except number of children in family at $p<0.05$ level.
- ♣ There was no significant association between the post test level of concentration among school age children in the control group with all demographic variables such as age, gender, religion, area of residence, type of family, birth order, number of children in family, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and the child residing with at $p<0.05$ level.

The first objective was to assess the pre test and post test level of concentration among school age children in experimental and control group.

The analysis of pre test level of concentration in experimental group, out of 30 samples, 3 (10%) of them were having average concentration, 27 (90%) of them were having below average concentration and none of them were having good and poor concentration.

With regard to the pre test level of concentration in control group, out of 30 samples, 12 (40%) of them were having average concentration, 18 (60%) of them

were having below average concentration and none of them were having good and poor concentration.

The above findings was supported by a study conducted by **Leslie B. Ranew (2008)**to determine the effects of using Concentration enhancement therapy on student achievement, concentration and participation in a primary school U.S. History class and on students' attitudes toward their use. The two classes of 50 students participating in the 8-week study were taught with the same lesson plans and materials. The concentration enhancement therapy group did 30 minutes of specific activities to begin each class. Post test was conducted with the use of concentration enhancement therapy attitude survey. Results shows mean score is 34.25, $p \leq 0.05$. There was no significant difference in student achievement or participation, however an attitudes survey indicated that students using concentration enhancement therapy believed that use of the activities increased participation in lessons and helped them to concentrate on the classes.

The second objective was to find out the effectiveness of concentration enhancement therapy on concentration among school age children in the experimental group.

In experimental group the post test mean value was 121.3 with the standard deviation of 30.32. In control group the post test mean value was 96.6 with the standard deviation of 26.5. The calculated 't' test value was 3.388.

The above findings showed that, the mean post test level of concentration in experimental group was higher than the mean post test level of concentration in control group of school age children.

Hence the research hypothesis stated that, the mean post test level of concentration among school age children in the experimental group was significantly higher than the mean post test level of concentration in the control group at $p<0.05$ level.

The above findings was supported by a study conducted by**Dorothy H. L (2006)** to assess the effectiveness of concentration therapy on reading achievement, attention and concentration among 60 selected students using standardized Stanford 9 test. The study compared the children's reading percentage scores from May 2005 (the end of the previous year), to those of May 2006 (the end of the "Concentration Enhancement therapy" school year). They also compared the scores of students from control classes with the scores of students from "Enhancement therapy" classes. The results showed that 80% of students scored more than 30% increase in reading achievement, attention and their concentration level after Concentration enhancement therapy.

The third objective was to compare the pre test and post test level of concentration among the school age children in experimental group.

On analysis of paired 't'test, showed that the mean value of 80.16 with the standard deviation19.10 in pre test and the mean value of 121.33 with the standard deviation 30.32 in post test. The mean difference was 41.16. The calculated't' test value was 6.2915.

The findings showed that, the mean post test level of concentration among the school age children in experimental group was higher than the mean pre test level of concentration in experimental group.

Hence the research hypothesis stated that, the mean post test level of concentration among school age children in the experimental group was significantly higher than their mean pre test level of concentration at $p<0.05$ level.

The above findings was supported by a study conducted by **Hyatt (2007)** to assess the concentration of Concentration Enhancement therapy among primary childrens,the results showed an increase of 33.22 points on the means of student posttest scores when compared to their means scores on the pretest, the control group showed an increase of 28.25 points, indicating that the use of Concentration Enhancement therapy were improve student achievement when long-term memory was involved however, when comparing the means of both groups' performance on chapter tests, the treatment group outscored the control group by 8 points. The difference was not significant, but noteworthy, possibly indicating that the use of Concentration Enhancement therapy improved concentration of student achievement when short-term memory was involved, but not long-term memory. There is a need for more research to substantiate the effectiveness of Concentration Enhancement therapy in improving academic learning especially concentration.

The fourth objective was to associate the post test level of concentration among school age children with their selected demographic variables in the experimental group and control group.

The findings showed that, there was no significant association between the post test level of concentration among school age children in the experimental group and control group with their demographic variables such as age, gender, religion, area of residence, type of family, birth order, education status of father, education status of mother, occupational status of father, occupation status of mother, family income and

the child residing except number of children in family in experimental group at $p<0.05$ level.

Hence the research hypothesis stated that, there was a significant association between the post test level of concentration among school age children in the experimental group with their selected demographic variables was rejected.

The above findings were supported by a study conducted by **Bonzia (2009)** to examine the ability of 60 elementary school students with concentration problems. Ranging in age from seven to eleven years, the students were matched according to age and gender and assigned equally for Concentration Enhancement therapy treatment groups' intervention and one control group. The first treatment group was called the integration-movement-only group. This group performed Concentration Enhancement therapy for ten minutes twice a day. The treatment was continued five days a week for six weeks. The other treatment group in this experiment received an additional 10-minute precursor session for cancellation task. When analyzed by demographic characteristics only age group showed a statistically significant difference in concentration scores comparing before and after the intervention.

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CHAPTER-VI

SUMMARY, CONCLUSION, LIMITATIONS, NURSING IMPLICATION AND RECOMMENDATIONS

This chapter deals with the summary, conclusion, limitations, nursing implication and recommendations.

SUMMARY

This study was undertaken to assess the effectiveness of concentration enhancement therapy on concentration among school age children in selected schools at Nagercoil.

School age period is one of the most important period of one's life. It is a period of stress and strain of day dreams of intense affection and excitement. It is full of love and showers its affection on any one without any pre thinking. The school age children are still lacks maturity of thought and experience.

Low concentration and attention levels are a common problem among millions of children. With each passing day, more children are suffering from concentration problems, when they find it extremely difficult and tough to concentrate or focus on a particular issue for too long. Loss of concentration could pose a serious problem of the children, especially in his or her classroom. Nevertheless, nurturing concentration and focus in child is a not difficult task. Persons can help the children to develop focus and concentration, by using a number of useful activities and exercises.

(Andrew loh- 2010)

THE OBJECTIVES OF THE STUDY WERE

1. To assess the pretest and posttest level of concentration among school age children in experimental group and control group.
2. To find out the effectiveness of concentration enhancement therapy on concentration among school age children in the experimental group.
3. To compare the pretest and posttest level of concentration amongschool age children in experimental group.
4. To associate the posttest level of concentration amongschool age children with their selected demographic variables in experimental and control group.

THE RESEARCH HYPOTHESES STATED WERE

H_1: The mean post test level of concentration among school age children in experimental group will be significantly higher than the mean post test level of concentration in the control group.

H_2:The mean post test level of concentration amongschool age children in the experimental group will be significantly higher than their mean pre test level of concentration.

H_3: There will be a significant association between the post test level of concentration among school age children in experimental group and control group with their selected demographic variables.

THE ASSUMPTION WERE

- Most of the school age children may have low concentration.
- Concentration enhancement therapy may be beneficial to improve the level of concentration.
- Level of concentration may vary from individual to individual.

THE REVIEW OF LITERATURE COLLECTED FOR THE STUDIES WERE

Section-A: Studies related to Effectiveness of Concentration enhancement therapy on concentration.

Section-B: Studies related to Effectiveness of Concentration enhancement therapy for other academic problems.

Section-C: Studies related to Prevalence of lack of Concentration.

The theoretical frame work for this study was based on Imogene King's Goal Attainment Theory. This provides a comprehensive framework for assessment, implementation and evaluation of the intervention program.

The research design selected for this study was true experimental design. The study was conducted in St.Xavier,St.Francises, little flower and PunithaAlosious primary Schools.The tool used for data collection consisting of two sections. Section A deals with demographic variables such asage, sex, religion, area of residence, type of family, birth order, number of children in the family, education status of mother, education status of father, occupational status of father, occupational status of mother, family income, the child residing with .Section B consists of the ModifiedRaven's assessment scale to assess the level of concentration which was used for the study to assess the level of concentration among school age children.

The tool was validated by five experts consisting of four nursing experts and one medical expert in the field of peadiatric and psychiatry. The reliability of the tool was confirmed by test retest method by using Karl Pearson's correlation coefficient formula. The reliability was r=0.89 which showed a highly positive correlation of the tool. The pilot study was conducted and findings revealed that the tool was feasible and practicable to conduct the study. The main study was conducted in St.Xavier,St.Francises, little flower and PunithaAlosious primary School. Sixty school age children who fulfilled the inclusive criteria were selected for the study, out of

which 30 school age children from St.Xavier and St.Francises primary School were allotted to experimental group and 30 school age children From little flower and PunithaAlosious Primary School were allotted to the control group.

FINDINGS

The data was collected and analyzed by using the descriptive and inferential statistics. The findings revealed that, there was a significant difference in the level of concentration among school age children after the administration of concentration enhancement therapy. The calculated 't' value was 3.388which showed a highly significant difference in the post test level of concentration between the experimental and control group of school age children at $p<0.05$ level. Hence the research hypothesis stated that "the mean post test level of concentration among school age children in the experimental group will be significantly higher than the mean post test level of concentration in the control group" was retained at $p<0.05$ level.

On analysis of paired 't'test, showed that the mean value of 80.16 with the standard deviation 19.10 in pre test and the mean value of 121.33 with the standard deviation 30.32 in post test. The mean difference was 41.16. The calculated't' test value was 6.291. The findings showed that the mean post test level of concentration among the school age children in experimental group was higher than the mean pre test level of concentration in experimental group. Hence the research hypothesis stated that the mean post test level of concentration among school age children in the experimental group was significantly higher than their mean pre test level of concentration at $p<0.05$ level.

Data findings revealed that there was no significant association between the post test level of concentration among experimental group and control group with their selected demographic variables except number of children in the family in experimental group.

CONCLUSION

From the result of the study, it was concluded that providing concentration enhancement therapy to the school age children was very effective in improving the level of concentration. Therefore the investigator felt that, more importance should be given forconcentration enhancement therapy to increase concentration among school age children.

IMPLICATIONS

The researcher has derived the following implications from the study which are of vital importance in the field of nursing practice, nursing administration, nursing education and nursing research.

Implications for Nursing Practice

1. Nurses should have thorough knowledge regarding on identifying the level of concentration among school age children.
2. Nurses can encourage the hospitalized school age children to do concentration enhancement therapy in Pediatric hospital settings.
3. Nurses can encourage the parents to motivate their children to practice concentration enhancement therapy in household routine.
4. Nurses can educate the school teachers about different type of concentration enhancement therapy to the students in schools.

Implications for Nursing Education

1. The nurse educators need to be ready with adequate knowledge regarding different types of therapies in improving the level of concentration.

2. Nursing students can receive adequate practice in using concentration enhancement therapy on improving the academic performance of school age children.
3. Conduct workshops and conferences for introducing different types ofconcentration enhancement therapy in our nursing curriculum.
4. Nurse educator can conduct in-service education on uses of concentration enhancement therapy to their nursing students.

Implications for Nursing Administration

1. Nurses can assist in implementing public health awareness campaigns aimed at promoting concentration by using concentration enhancement therapy to the school age children.
2. Nurse administrators can conduct training programs on concentration enhancement therapy for staff nurses, nursing students and social workers.
3. Nurses should conduct continuing nursing education programme regarding the benefits ofconcentration enhancement therapy.
4. The nurse administrator coordinates her activity along with the curative and rehabilitative aspects of care among school age children by motivating them to the practice ofconcentration enhancement therapy.

Implications for Nursing Research

As a nurse researcher:

1. Nurse can conduct a research on creating different types of ratting scale for assessing the level of concentration among different age group children.
2. Encourage further research to be conducted to find out the effectiveness of concentration enhancement therapy among school age children on other conditions.
3. Disseminate the findings of the research through conferences, workshops, seminars and publishing in nursing journals.

LIMITATIONS

- The study period is limited for a period of 4 weeks.
- The study is limited to the school age children studying third standard in the age group between 7- 9 years.
- The study is limited to the school age children who have poor concentration.

RECOMMENDATIONS

The following studies can be undertaken to strengthen concentration enhancement therapy as a good remedy for concentration among school age children.

- ♣ A study can be carried out to assess the academic performance and learning disabilities among school age children.
- ♣ A study can be conducted with large sample size to generalize the results of the study.
- ♣ A study can be conducted to different population of school children.
- ♣ Comparative study can be conducted to find out the effectiveness of concentration enhancement therapy on level of concentration among school children in days scholar and hostel students.

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APPENDIX – A

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

SRI K. RAMACHANDRAN NAIDU COLLEGE OF NURSING

Approved by Govt. of Tamilnadu and Indian Nursing Council / T.N.C
Affiliated to the Tamilnadu Dr. M.G.R. Medical University

K.R. Naidu Nagar - 627 753, Paruvakudi Village, Post Bag No.1, Karivalam (via)
Sankarankovil (Tk), Tirunelveli (Dt), Ph. : 04636 - 260950, Fax : 04636 - 260377.
E - Mail : srikmcon@yahoo.com Web : srikmaiducollegeofnursing.org

23.07.2014

To

The Headmistress,
St.Xavier primary school,
Kottar,
Nagercoil.

Respected Sir/Madam,

Miss.R.SujathaKannan is a bonafide student of our college studying in M. sc (N) programme. As a partial fulfilment of the university requirement for the award of the M.Sc (N) degree, she needs to conduct research project.

Her chosen research project is as follows **"A STUDY TO ASSESS THE EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION AMONG SCHOOL AGE CHILDREN IN SELECTED SCHOOLS AT NAGERCOIL".**

She will abide by rules and regulations of the school and adhere to the policies during her period of data collection from 1-8-2014 to 31-8-2014. Permission may kindly be granted to her for conduction of the study at your esteemed school.

Further details of the proposal project will be furnished by the student personally, confidentiality will be ensured in the research project.

Thanking you

Permitted.

தலைமையாசிரியை
புனித சேவியர் தொடக்கப் பள்ளி
கோட்டாறு, நாகர்கோவில்-629 002

Yours faithfully,

Principal
Sri K. Ramachandran Naidu
College of Nursing
K.R. Naidu Nagar - 627 753. Karivalam (Via)
Sankarankovil (T.K.) Tirunelveli Dt.

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

SRI K. RAMACHANDRAN NAIDU COLLEGE OF NURSING

Approved by Govt. of Tamilnadu and Indian Nursing Council / T.N.C
Affiliated to the Tamilnadu Dr. M.G.R. Medical University

K.R. Naidu Nagar - 627 753, Paruvakudi Village, Post Bag No.1, Karivalam (via)
Sankarankovil (Tk), Tirunelveli (Dt), Ph. : 04636 - 260950, Fax : 04636 - 260377.
E - Mail : srikmcon@yahoo.com Web : srikmaiducollegeofnursing.org

23.07.2014

To

The Headmistress/Headmaster,
Punitha Francis school,
Veppammoodu junction,
Nagercoil.

Respected Sir/Madam,

Miss.R.SujathaKannan is a bonafide student of our college studying in M. sc (N) programme. As a partial fulfilment of the university requirement for the award of the M.Sc (N) degree, she needs to conduct research project.

Her chosen research project is as follows **"A STUDY TO ASSESS THE EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION AMONG SCHOOL AGE CHILDREN IN SELECTED SCHOOLS AT NAGERCOIL".**

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Further details of the proposal project will be furnished by the student personally. confidentiality will be ensured in the research project.

Thanking you

Yours faithfully,

Principal
Sri K. Ramachandran Naidu
College of Nursing
K.R. Naidu Nagar - 627 753. Karivalam (Via)
Sankarankovil (T.K.) Tirunelveli Dt.

permitted
Fr. Soh Bellarmine
28.07.2014
CORRESPONDENT
ST. FRANCIS PRIMARY SCHOOL
NAGERCOIL-629 001

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

SRI K. RAMACHANDRAN NAIDU COLLEGE OF NURSING

Approved by Govt. of Tamilnadu and Indian Nursing Council / T.N.C
Affiliated to the Tamilnadu Dr. M.G.R. Medical University

K.R. Naidu Nagar - 627 753, Paruvakudi Village, Post Bag No.1, Karivalam (via)
Sankarankovil (Tk), Tirunelveli (Dt), Ph. : 04636 - 260950, Fax : 04636 - 260377.
E - Mail : srikmcon@yahoo.com Web : srikmaiducollegeofnursing.org

23.07.2014

To

The Headmistress,
PunithaAlosious High School,
Christhu Nagar,
Nagerkoil,

Respected Sir/Madam,

Miss.R.SujathaKannan is a bonafide student of our college studying in M. sc (N) programme. As a partial fulfilment of the university requirement for the award of the M.Sc (N) degree, she needs to conduct research project.

Her chosen research project is as follows "A STUDY TO ASSESS THE EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION AMONG SCHOOL AGE CHILDREN IN SELECTED SCHOOLS AT NAGERCOIL".

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Further details of the proposal project will be furnished by the student personally, confidentiality will be ensured in the research project.

Thanking you

Yours faithfully,

Correspondent
St. Aloysius Hr. Sec. School
Chayakkaran Parappuvilai
Nagercoil - 629 003

Principal
Sri K. Ramachandran Naidu
College of Nursing
K.R. Naidu Nagar - 627 753. Karivalam (Via)
Sankarankovil (T.K.) Tirunelveli Dt.,

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

SRI K. RAMACHANDRAN NAIDU COLLEGE OF NURSING

Approved by Govt. of Tamilnadu and Indian Nursing Council / T.N.C
Affiliated to the Tamilnadu Dr. M.G.R. Medical University

K.R. Naidu Nagar - 627 753, Paruvakudi Village, Post Bag No.1, Karivalam (via)
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E - Mail : srikmcon@yahoo.com Web : srikmaiducollegeofnursing.org

23.07.2014

To

The Headmistress,
Little Flower Primary School,
Ramanputhur,
Nagercoil.

Respected Sir/Madam,

Miss.R.SujathaKannan is a bonafide student of our college studying in M. sc (N) programme. As a partial fulfilment of the university requirement for the award of the M.Sc (N) degree, she needs to conduct research project.

Her chosen research project is as follows **"A STUDY TO ASSESS THE EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION AMONG SCHOOL AGE CHILDREN IN SELECTED SCHOOLS AT NAGERCOIL".**

She will abide by rules and regulations of the school and adhere to the policies during her period of data collection from 1-8-2014 to 31-8-2014. Permission may kindly be granted to her for conduction of the study at your esteemed school.

Further details of the proposal project will be furnished by the student personally, confidentiality will be ensured in the research project.

Thanking you

Yours faithfully,

Principal
Sri K. Ramachandran Naidu
College of Nursing
K.R. Naidu Nagar - 627 753. Karivalam (Via)
Sankarankovil (T.K.) Tirunelveli Dt.

Permitted.
Sr. M. Josie Carolin 23/07/14.
The Headmistress
LITTLE FLOWER PRIMARY SCHOOL
RAMANPUTHUR
NAGERCOIL - 4. K. K. DIST.

APPENDIX – B

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY

From:

Miss.R.Sujathakannan,
M.Sc Nursing, II Year,
Sri.K. Ramachandran Naidu College of Nursing,
Sankarankovil.

To:

Subject: Seeking validation of tool and content validity

Respected Sir/ Madam,

I am M.Sc Nursing II year student studying in Sri K. Ramachandran Naidu college of Nursing, Sankarankovil under the Tamil Nadu Dr.M.G.R Medical University, working on dissertation titled, "**A STUDY TO ASSESS THE EFFECTIVENESS OF CONCENTRATION ENHANCEMENT THERAPY ON CONCENTRATION AMONG SCHOOL AGE CHILDREN IN SELECTED PRIMARY SCHOOLS, AT NAGERCOIL."** The dissertation is to be submitted to the Tamil Nadu Dr.M.G.R Medical University, as a partial fulfillment for the requirement of M.Sc Nursing . Hence I request you to kindly evaluate the tool items and give your valuable opinion and suggestions for improvement of this tool. I would be highly obliged and thankful to hear from you.

Thanking you in anticipation.

Place :Yourssincerely,

Date :**(R.Sujathakannan)**

Enclosures:

Content validation certificate
Statement of the problem
Research methodology
Research tool,Scoring key
Criteria checklist for content validation of tool

APPENDIX – C

CONTENT VALIDITY CERTIFICATE-MEDICAL EXPERT

CONTENT VALIDATION CERTIFICATE

I Dr. NAGARAJAN . M.B.B.S. D.P.M hereby certify that I have validated the tool of R.Sujatha kannan,II year M.Sc Nursing student of Sri .K.Ramachandran Naidu College of Nursing,Sankarankovil who is under taking the following study.

"A study to assess the effectiveness of concentration enhancement therapy on concentration among school age children in selected schools at Nagercoil".

Date: 4.5.15

Signature of the expert

4.5.15

Dr. B. NAGARAJAN, M.B.B.S., D.P.M.,
Reg. No. 23644,
PSYCHIATRIC CONSULTANT,
73, EAST DE TOWER,
NAGERCOIL.

Designation and address

CONTENT VALIDITY CARTIFICATE-NURSING EXPERT

CONTENT VALIDATION CERTIFICATE

I **Prof. (Mrs). Jasmine sheela** here by certify that I have validated the tool of R.Sujatha kannan,II year M.Sc Nursing student of Sri .K.Ramachandran Naidu College of Nursing,Sankarankovil who is under taking the following study.

"A study to assess the effectiveness of concentration enhancement therapy on concentration among school age children in selected schools at Nagercoil".

Date:

Signature of the expert

Principal
Mount Zion College of Nursing
Pillivalam, Thirumayam Taluk,
Pudukkottai - 622 507.
TamilNadu, India.

Designation and address

APPENDIX-D

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr.B. Nagarajan**

   M.B.B.S., D.P.M. (Psychiatry),

   79,East of tower

   Nagercoil, Kanyakumari-629 002

   Tamil Nadu.

2. **Dr .P.Lakshmanan**

   M.B.BS.,M.D.(Paediatrics)DCH

   Child specialist and Neonatalogist,

   SaraloorKottar,

   Kanyakumari District.

3. **Prof. (Mrs). Jasmine sheela**

   Principal,

   Zion mount College of Nursing,

   Pudukottai .

4. **Prof. (Mrs). VioleneSheeba**

   Principal,

   Thasaiah college of nursing ,

   Marthandam

5. **Mrs. Malchijah M.sc(nursing)**

   HOD of child health nursing,

   Christian college of nursing ,

   Neyyor,

6. **Mrs .ArulsiliNinchal M.sc(nursing)**

   HOD of child health nursing,

   Shakthi college of nursing ,Oddanchatram.

APPENDIX-E

ENGLISH EDITING CERTIFICATE

CERTIFICATE OF ENGLISH EDITING TO

WHOM SO EVER IT MAY CONCERN

This is certify that the dissertation work "A study to assess the effectiveness of concentration enhancement therapy on level of concentration among school age children in selected schools at Kanyakumari District " done by **Ms.R.Sujatha kannan**, M.Sc(Nursing)II Year in Sri.K.Ramachandran Naidu College of Nursing,Tirunelveli was edited for English language appropriateness by L. Judith Sophia

Date:

Signature 7/5/15

Dr. L. Judith Sophia
MA, M.Phil, Ph.D
Assistant Professor of English

Designation

Scott Christian College
(Autonomous)
Nagercoil-3

APPENDIX-F

CERTIFICATE OF INFORMED CONSENT

Dear students,

I **Ms.R.Sujathakannan**,M.Sc.(N) II year student from Sri. K. Ramachandran Naidu College of Nursing, Tirunelveli is conducting an experimental study to assess the effectiveness of concentration enhancement therapy on level of concentration among school children in Primary School at Kanyakumari District, as a partial fulfillment of the requirement for the degree of M. Sc. in Nursing under the Tamil Nadu Dr. M.G.R. Medical University. The concentration will be assessed using Roven's Assessment scale. I assure that the responses given by you will be used only for my study purpose. Then I will administer concentration enhancement therapy to you. Concentration enhancement therapy will be given one time per day for 20 days. There is no right or wrong answers. So please feel free in answering the questions. This will be promoting your welfare.

I assure you that information obtained will be kept confidential. So, I request you to kindly give your full co-operation and willingness to conduct this study effectively and successfully.

Thank you.

APPENDIX – G

TOOL FOR DATA COLLECTION

The tool consists of two sections.

Section A:-Demographic variables:-

It consists of structured interview schedule. It has questions related to the demographic data of the school age children.

Demographic variables of school children

1. Age
    a. 7 years
    b. 8 years
    c. 9years
2. Gender
    a. Male
    b. Female
3. Religion
    a. Hindu
    b. Christian
    c. Muslium
4. Area of Residence
    a. Rural
    b. Urban
5. Type of Family
    a. Nuclear
    b. Joint
6. Birth order
    a. 1st
    b. 2nd
    c. 3rd&above
7. Number of children in the family
    a. One
    b. Two
    c. Three &more
8. Education status of father
    a) Illiterate
    b) Primary
    c) Higher secondary
    d) Graduate &above
9. Education status of mother
    a) Illiterate
    b) Primary
    c) Higher secondary

d) Graduate &above

10. Occupational status of father
    a) Coolie
    b) Private employee
    c) Government employee
    d) Business

11. Occupational status of mother
    a) Home maker
    b) Private employee
    c) Government employee
    d) Coolie
12. Family income
    a) Below Rs 5,000
    b) Rs 5001- 10,000
    c) Rs 10001 - 15,000
    d) Rs15001&above
13. The child residing with
    a) With both father &mother
    b) With single parent
    c) In hostel
    d) With grandparents/guardians'

SECTION B:MODIFIED ROVENS ASSESSMENT SCALE FOR SCHOOL CHILDREN

S.NO	ITEMS	Degree of activity			
		Good	Average	Below average	Poor
1	Has difficulty keeping attention to what needs to be done.				
2	Does not seem to listen when spoken to directly.				
3	Is easily distracted by outside stimuli.				
4	Argues with teachers &parents for meaningless activities.				
5	Does not follow the rules and commands of teachers.				
6	Is physically cruel to people.				
7	Jumps from one work to another work without completing.				
8	Stay seated/ Sit still.				
9	Does not follow through an instructions and fails to finish school work ,or duties in the work place.				
10	Does not pay attention to details or makes careless mistakes. for eg (home work)				
11	Loses things necessary for tasks or activities(pencils,books,notes,box)				
1	Sleeps during class hours.				

2					
13	Fights with hands or feet or squirms in seat.				
14	Blames others for his or her mistakes or misbehaviors'.				
15	Day dreaming when class is going on.				
16	Is forget full in daily activities.				
17	Deliberately destroys other's property.				
18	Is truant from school .(skips school with out permission)				
19	Parents often meets the principal, headmaster,&classteacher for inattentive of students in class room.				
20	Has difficulty with time concepts.				
21	Stands out side the class due to in completion of works.				
22	Disrupting class.				
23	Lies to obtain goods for favors or to avoid obligations.				
24	Uniform is always dirty.				
25	His/her Hair is always un combed properly.				
26	Is afraid to try new things for fear of making mistake.				
2	Prefer to sit in the corner of the row.				

7					
28	Does not copy from other print correctly (eg. from the black board ,from others books)				
29	Omits, adds , substitutes and reverses letters in words.				
30	Writes very slowly while detecting the notes.				
31	Frequently use erasures on papers/torn papers/scratching out.				
32	Not interested in craft works.eg(cutting papers with scissors)				
33	Not interested in drawing &coloring pictures.				
34	Writes imposition.				
35	Write a letter or symbol in consistently or change them. (eg)b as ‘d,was’as saw				
36	Has difficulty in studying independently.				
37	Dose not finish the projects works at particular time.				
38	Dose not answer the questions that are asked during class time.				
39	Reads and /or writes numbers and numbers patterns in consistently (eg) writes 31as13				
40	Is always scoring marks below average .				
41	Says multiplication table,but cannot use them meaningfully .				
4	Difficulties in remembering the names				

2	of people or places.				
43	Has difficulty recalling events in order. (sequencing)				
44	Takes more time to answer simple questions.				
45	They have no interest towards subject (eg) science, class.				
46	School bag consists of wastes like. (eg) papers, sweet papers, pencils waste.				
47	Notes and books are not there according to the time table.				
48	Bullies, threatens, or intimidates others.				
49	Blames self for problems, feels guilty.				
50	Feels lonely , unwanted , or unloved , complains that no one loves him or her”				
51	Is sad , un happy or depressed about himself/herself.				
52	Feels worthless or inferior.				
53	Scoring digit marks in all class tests.				
54	Relationship with peers.				
55	Is fear full anxious or worried.				

Score interpretation:

Scores are obtained by summing across all four items. Total score-220

SCORE	INTERPRETATION
1 -55	Poor
56 – 110	Below average
111- 165	Average
166- 220	Good

APPENDIX- H

DESCRIPTION OF TOOL AND SCORING KEY

MODIFIED RAVEN'S ASSESSMENT SCALE

The Roven's concentration assessment scale is administered with the help of class teacher or parents that focuses on one's concentration in acedamic performance. The Scale assesses how the individual students "concentrate in class".Modified Raven's assessment scale is used to assess the level of concentration which contains 55 items. It is a four point scale. Each item was scored as 4 good, 3 average, 2 below average, 1poor. Total score is 220.

SCORE	INTERPRETATION
166-220	Good
111 – 165	Average
56-110	Below average
1-55	Poor

APPENDIX- I

STEPS OF INTERVENTION

Steps :

- The researcher established rapport with the school children.
- The participants in the experimental group were made to stand in 5 members at 3 rows with 2 feet distance.
- The investigator divide experimental group into two groups (I AND II). Each group has 15 school children.
- Experimental Group I and II can practice concentration enhancement therapy every day morning according to time schedule.

The schedule for the intervention as follows:

Groups	Time
I Group	9.30-10am
II Group	11-11.30am

- The investigator demonstrates the concentration enhancement therapy to the experimental group and the experimental group will do the return demonstration. The investigator do the concentration enhancement therapy along the experimental group daily for 30 minutes. The experimental group practice concentration enhancement therapy for 30minutes everyday for the period of 20days in the presence of investigator.
- The researcher told the school age children to do physical exercise for 20 minutes
- The researcher guided the school age children to do letter cancellation task and colour cancellation task for10 minute.
- Finally the researcher told the school age children to sit straight and get relaxation to close the session.
- Totally each session was conducted for 30 minutes.

1. Physical exercise -20minutes
2. Letter cancellation -5minutes
3. Color cancellation -5minutes

Each day half hour the sessions will be commenced with all thirty samples. Make them to stand in three rows and the researcher will stand in front of them.

PHYSICAL EXERCISE

Step1: Bending exercise

Stand straight with your legs together

- Raise your hands above your head

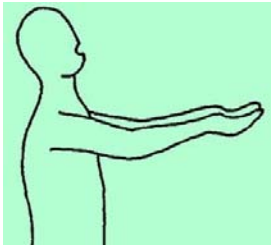
- Bow forwards with out flexing your knees touch the tip of the toes with your hands.

- Repeat all this for 5 minutes

Step2: Extension exercise

- Stand straight with your legs together

- Extend to your head towards side.



- Extend your hands towards your shoulder level

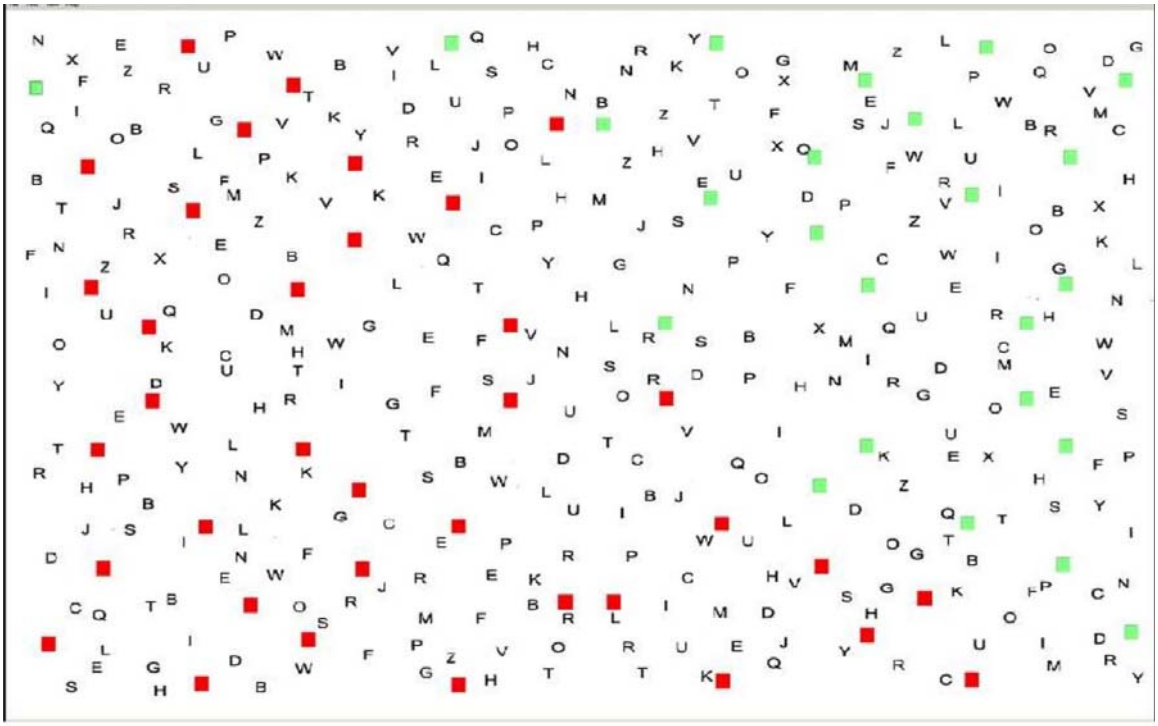
- Come back to normal position repeat all this for 5 minutes

Step:3 Running

Makes the children to run around the ground in a order for 10 minutes .

- **Letter cancellation**

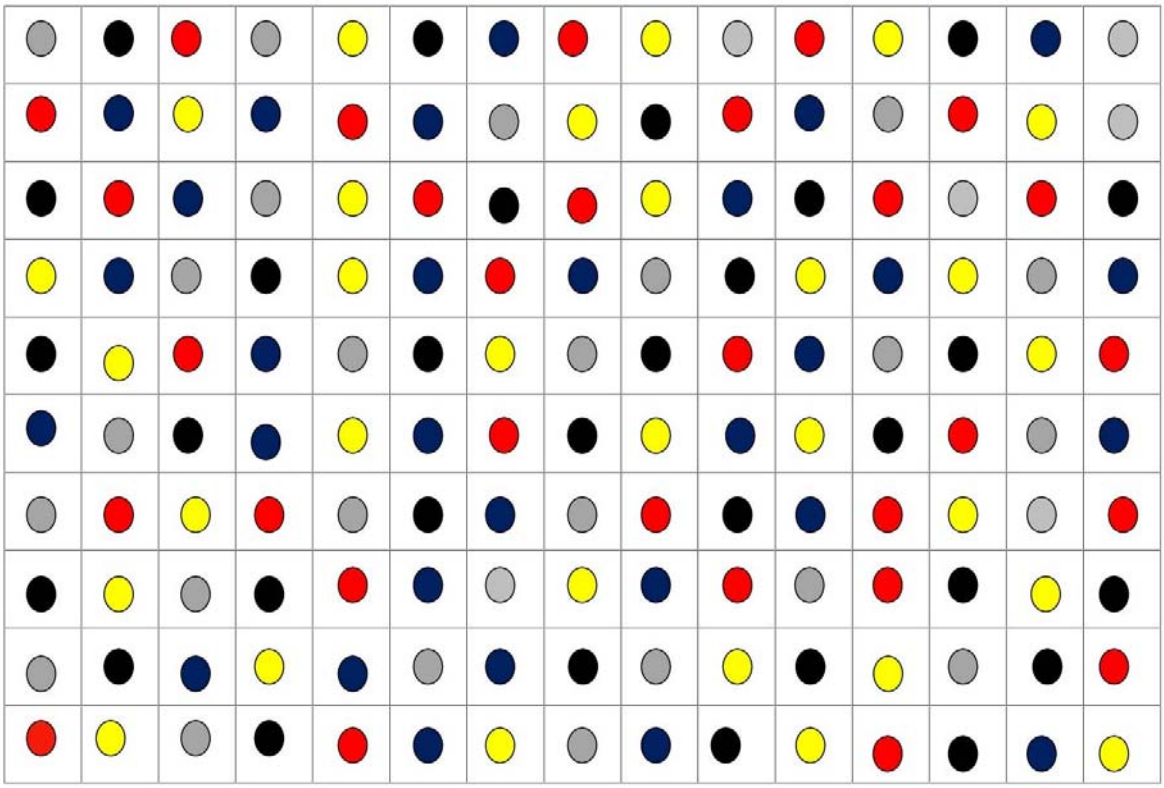
Each sample will be provided with a sheet, where both capital and small alphabets were printed in a random manner. This activity comprised of three tasks .The first task consist of canceling only the capital letters within one minute .Task two involved canceling the small letters before and after a double space within 45 second .Task three comprised canceling both small and capital letters as well as the letters before and after each double space within 30 second .The time frame had been reduce from 1minute, 45 second, 30 seconds respectively.



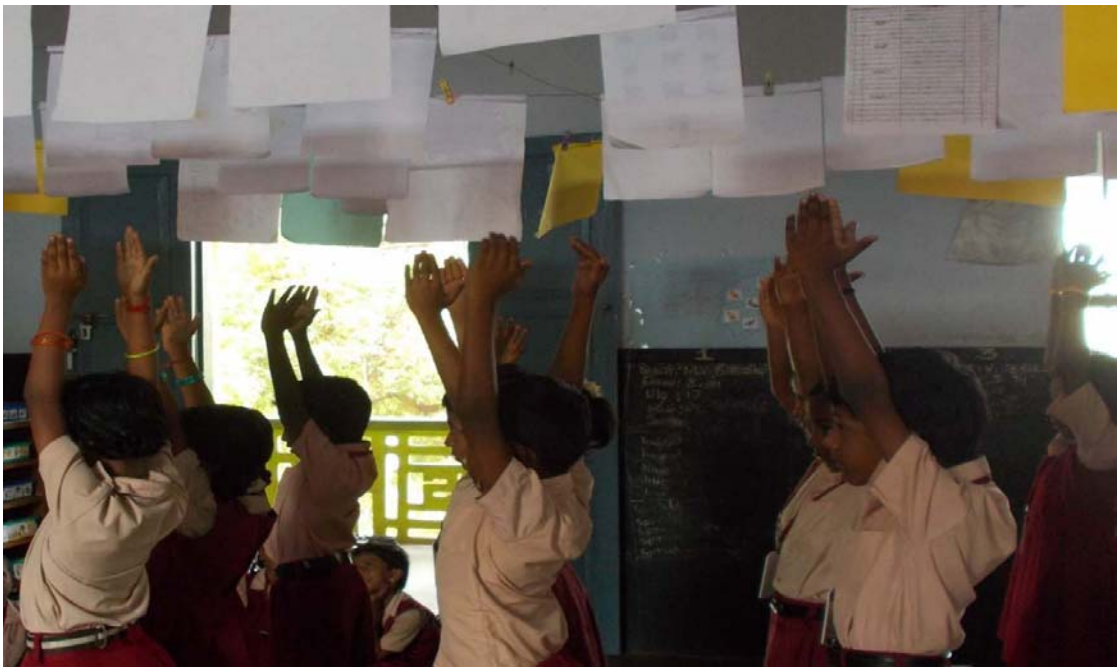
b	x	L	V	a	c	E	A	b	o	W	A	a	p
a	s	A	F	u	m	Y	N	a	b	G	H	r	b
n	b	N	A	a	m	A	B	S	r	M	O	p	o
t	e	C	B	b	a	N	P	U	f	A	L	s	n
a	e	R	A	c	n	R	T	b	a	U	P	s	k
u	n	M	N	a	f	S	R	h	s	B	U	b	a
j	a	L	P	h	b	U	A	v	x	E	A	s	p
b	n	M	A	z	a	M	B	e	t	E	B	u	a
j	s	N	G	b	d	I	A	k	a	A	E	n	l
l	u	O	R	a	v	A	I	o	l	T	M	b	i
a	v	N	G	c	m	N	T	b	p	H	A	g	h
r	i	A	E	d	a	T	S	a	e	A	N	t	b
n	b	M	A	w	u	A	U	r	y	D	D	a	o
b	a	N	G	q	b	N	J	v	a	S	A	b	m
m	o	O	H	b	a	I	A	x	e	U	O	n	b
b	e	A	P	a	s	T	T	w	q	V	I	j	r
a	r	P	L	z	u	A	H	s	b	A	P	b	a

- **Color cancellation**

A sheet consists of five colors red,blue,yellow,black and gray. Each color consists of 30 dots. Total dots present in the sheet are 150 colored. The dots were arranged equidistant from each other in a random order .There are two parts of the test –simple color canceling and complex color cancellation .The student was first asked to name or match the colored dots in order to test his or her color vision .In the simple task the subject was instructed to cross out all the black dots with pencil provided as fast as they can. The number of missing dots was recorder.



Experimental group

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